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ABSTRACT

Composing this document are 15 research-based speeches presented at the North American Conference on Labor Statistics by students and leading authorities in the field. Among the prevailing themes were: (1) labor statistics and their relationship to life styles, (2) women laborers, sex discrimination, and provisions for working mothers, (3) recent research conducted on social indicators and their relationship to the labor market, (4) blacks in the building trades, (5) inflation: its effects and implications to labor, (6) wages and productivity in the United States and Canada, and (7) the status of the labor market as it relates to the teenager as a potential member of the labor force. (SN)

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NORTH AMERICAN CONFERENCE ON LABOR STATISTICS

JUNE 8-12, 1970

HOUSTON, TEXAS

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U.S. DEPARTMENT OF LABOR
J. D. Hodgson, Secretary

BUREAU OF LABOR STATISTICS
Geoffrey H. Moore, Commissioner

1972

THE ROLE OF LABOR STATISTICS IN THE QUALITY OF LIFE

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(Keynote address presented to the North American Conference on Labor Statistics 28th Interstate Conference on Labor Statistics, Houston, Texas; June 8-12, 1970; morning session, June 8.)

Social statistics are a valuable instrument for the betterment of human life. Without the organized information these statistics provide on our complex society, we could have only a vague notion of where we stand. Having these statistics, we know better the progress already made, and something of the direction we have to go. Without these statistics, further, we could barely begin to understand and weigh the factors that account for our condition. With them, we are managing to build a systematic body of tested knowledge concerning these factors; we are more keenly aware of how much we do not know; and we are better prepared to extend the boundaries of our knowledge. Finally, without the statistics we could not help but be in the dark when we choose policies to improve our situation, try to make them work, and try to determine how effective they really are. With the statistics, we are in a position to devise new policies and improve or reject old policies, and to do so more on the basis of reasoned experience and less on the basis of prejudice and guesswork.

It is fair to assume, then, that more and better social statistics would strengthen our efforts to reach the better life we seek for ourselves, our neighbors and the generations ahead.

Of course, investment in social statistics uses resources that could be used also to extend other means to the end we seek -- or provide for other ends, if we can think of any. But I believe that more and better social statistics -- even a substantial rise in the rate of increase of this part of the nation's capital -- would be socially profitable.

I must avoid giving the impression that there is, or that I think there is, anything like widespread agreement on just what a good life is and what a better life would be. Individual opinions differ; and even these, no matter how loudly expressed, hardly reflect crystal-clear views on the substance of a good life.

When we try to speak of the quality of human life, we face that most fundamental and difficult of questions -- the purpose of life, the reason for living. Involved are nothing less than man's ultimate ethical goals, about which there will doubtless remain many uncertainties. When men blink their eyes to these uncertainties, as they are compelled to, the formulas in which they find refuge differ -- and sooner or later, also, differences arise even in the content read in a formula.

This is not to say that there can be no measure of agreement on what to look at when we worry over the quality of life. Whether one believes that the volume of goods and services available to the people is an important or only a minor factor in the quality of their lives; whether one feels that it would or would not be better if there were more public parks and fewer automobiles, or more books and fewer television sets; or whether what really seems to count is the rate of progress in raising consumption and not the consumption level itself -- whatever the view on these matters, we all find it worthwhile to turn to the national accounts for a measure of the changing volume of consumption. And we seem to be coming to agreement that it is necessary to go beyond these accounts and include also the goods and services omitted from the conventional measurements of national product or income. Similarly, whatever our views, we now ask not only about quantities, but also about qualities. We focus not only on consumption, but also on the volume, character and conditions of the work done to produce the goods and services available for consumption. We agree also that we should not confine our attention to consumption and production alone but widen our view to include the changes -- good or bad -- in the environment within which we work and live. And more and more we look not only at averages but also at the variation around averages, and insist on having information on the position of each group in the distribution of incomes or jobs or housing or educational opportunities.

My examples are limited to indicators of economic welfare, those with which we are particularly concerned here. But they suffice to illustrate the kind of information generally thought relevant when the quality of life is in question. Lists of social indicators look more or less alike, whatever the compilers' views on the content of a good life.

Of course, these statistics provide no more than facts on some of the considerations that enter judgments on the quality of life. There are other considerations, not easily found in any list of social indicators that I have seen. Thus, thoughtful men dwell on the evils of selfishness and self-gratification, and the tranquility of spirit that flows from self-denial, self-discipline, and benevolence toward others. And they contrast the deep satisfactions of self-reliance and the acceptance of personal responsibility with the spiritual poverty and unease suffered by those bred to pusillanimity. Few of us would think it right to ignore these ethical and psychological considerations; but also, few of us could agree on just how important they are. Persons starting with the same list of social indicators can come out with different, sometimes quite different, judgments. Nevertheless, social statistics help to make the judgments better than they otherwise would be. And as visions change, the statistics can help in the task of revision and redefinition.

But I can claim more than just that for the statistics. The objective information provided by social statistics can help us also to appreciate one another's views on the content of a good life, and provide a basis for the consensus of opinion necessary for effective social action.

Further, to the extent that sharp differences of view persist over wide areas -- as we can be sure they will -- study of social statistics may also, perhaps, support the case for respecting these differences and for leaving the areas of difference open to self-determination. Conceivably, we may come to realize what John Stuart Mill realized over a century ago (and, more recently, George Stigler took the trouble to remind economists) -- that "no society in which eccentricity is a matter of reproach can be in a wholesome state."

I have been saying that social statistics have a valuable role to play in our efforts to define and judge the quality of life, but I have said little about the statistics themselves.

Labor statistics, our primary interest on this occasion, can be defined simply enough, I suppose, as the statistics compiled by the U.S. Bureau of Labor Statistics. But for our present purpose it is better to take a fresh view.

Specifically, when we think about the quality of life, I believe it would be a mistake to limit ourselves to the narrow and rather arbitrary concept of labor that is implied by current definitions in the labor force survey. We need a wider concept of labor, just as we need a wider concept of consumption. Indeed, as Gary Becker has taught economists recently, many problems related to work and consumption are more tractable when viewed as problems involving the allocation of time. There are, of course, significant differences between working as a housewife for one's keep and one's family or as a student for one's education or diploma, and working for a wage or salary. But there are significant differences also between working as an independent entrepreneur or as an employee, or as an employee in a large firm, and as an unpaid family worker in a store. All these differences must enter our judgments on the quality of life. But we will be better prepared to take note of the differences if we take note also of the common features. Statistics on all these kinds of work are "labor statistics."

Another reason for a broader view of labor and labor statistics stems from the increasing obsolescence of the old distinctions. Women in large numbers now move between the household and the market sectors in response to changing income differentials, and they to do so rather frequently. Also, consumers are participating in the work done in retail stores to an increasingly large extent. It was recently argued by David Schwartzman that the changing productivity of labor in retail trade cannot be explained without some reference to the consumer's self-service in the supermarket. Historical comparisons and comparisons between developed and developing countries of the status of women and other aspects of the quality of life may be subject to considerable error if we limit our attention to statistics conforming to a narrow definition of labor.

Something similar can be said about hours of work, which also enter judgments on the quality of life. All of us are familiar with the distinction that has sprung up, since World War II, between hours worked and hours paid for. But hours worked are defined too narrowly if we exclude travel time, as every commuter who drives bumper-to-bumper twice daily will agree.

To turn to another kind of information, I suspect that improvements in the conditions of work tend to be underestimated or even forgotten entirely because of gaps in our statistics. Accident statistics abound, of course, but to my knowledge there is little systematic and comprehensive information on the changes that have taken place in the cleanliness of the establishments where work is done, or in their lighting, noise, heat, humidity, and availability of eating and other facilities. Nor do I know of much in the way of direct information on the extent to which fork trucks and other devices have relieved men of the heavy burden they once had to carry. I am not suggesting that this kind of information needs to be made available on a frequent or even a regular basis. But when we ask about the quality of life, we are asking about conditions of work, among other things, and an occasional survey would provide a helpful answer.

There are still other features of work on which better and more systematic information would be desirable. The dulling effect that may result from the increasingly fine division of labor is an example. Adam Smith gave us his famous pin example of how the division of labor raises labor productivity and thus makes possible a better life. He wrote also a harsh criticism of its

other, its "corrupting and degenerating," effects on the quality of human life, when work limited to the performance of "a few simple operations" provides no occasion to exert one's understanding.

Opposite in its effects has been the growing importance of the intellectual pursuits, or more exactly, of the occupations requiring a degree of education. Many of these occupations undoubtedly offer little more challenge to the exercise of the intellectual powers than the work of which Smith complained. But this cannot be said of the professions and of what are coming to be called the paraprofessions, which have also grown to large numbers; and the education required by all these occupations can confer benefits that extend well beyond the work itself.

Still another service of education lies in uncovering latent talents and interests. Education makes it possible for young people -- if they do not resist the opportunity -- to discover what they like to work at and what they can do well. It is important because, as Herbert Stein remarked recently, "Work is the means most open to most people for self-expression and creativity." Too often, I suspect, we think of work as all disutility. Somehow, when we cast up our accounts on the quality of life, we must avoid this error.

I have touched, so far, on labor statistics as data for assessing the quality of life. I turn now to their use in advancing our understanding of the workings of the economy.

At a time of anxiety concerning employment, business conditions and price levels, it is hardly necessary to dwell on the importance of being able to understand and control the course of the economy. Nor is there need to explain to this audience what unemployment, for example, means for the dignity of a man and the quality of his life and the life of his family.

We are all wondering when the revival will come and the pressure of inflation let up. It is not easy to find a confident answer. Yet difficult as it is today to appraise the state of the economy, we were far worse off a generation ago. Those of you who have read the first paper on indicators of business revival prepared by Wesley Mitchell and Arthur Burns at the National Bureau during the dark winter of 1937-38, will remember that it was written in response to a call for help by an Administration buffeted by an economic storm of severe proportions. Men then in positions of responsibility had little systematic information by which to chart their course. The indicators of business expansion and contraction, among which labor statistics occupy an important place, are now published every month in the Business Conditions Digest. Improvements in these indicators, and the addition of indicators more informative on the process of inflation would mark another forward step.

Better statistics would also help bring closer the day when more formal models of the economy could be put to practical use.

Some progress has indeed been made. Not many years ago, model builders had little interest in statistics. They relied largely on the powers of their imagination; they lavished their attention primarily on the logic of their chains of reasoning; they were content to get along with their general knowledge of the facts. The situation is substantially different today. Much in the way of abstract model-building still goes on, it is true; and it is sometimes startling to see how empty of empirical content a volume of so-called econometric papers can be. But the number of truly econometric analyses is growing. More and more economists are beginning to understand what Justice Holmes once said about the law -- that its life "has not been logic: it has been experience" -- and to see the profound significance of Holmes' observation for the economics that is intended to serve the people.

Milton Friedman has in mind essentially the same idea when -- referring to models of the relations among output, prices, interest rates and money -- he says that "the basic differences among economists are empirical, not theoretical." In a National Bureau paper just off the press, he compares models of the quantity-of-money theory and the Keynesian income-expenditure theory and shows that these opposing theories are, in fact, special cases of a more general theory. The theories differ not in the variables they include, but rather in the importance their respective proponents assign to the different variables and in the values they assume for the speeds and degrees of response of the variables to changes in the economic situation. But if "the basic differences among economists are empirical" the differences can be resolved only by recourse to empirical data -- which means, among other things, statistics.

Empirical data are important also for policy. To continue with the problems of the day, consider the demand for a revival of some sort of wage-price guidepost policy to ease the path to a less inflationary economy with a minimum cost in unemployment and lost production. One of the issues here relates to the effectiveness of the guideposts applied during 1962-66. This is an empirical question. Another issue relates to the information -- on productivity, wages and prices -- needed in pursuing a guidepost policy. Whether the necessary information -- which would be needed for every industry in which questions might arise, as well as for the economy as a whole -- is available in sufficient quantity and adequate quality is also an empirical question.

I end with some obvious conclusions. More complete labor statistics -- on job vacancies, for example; more accurate labor statistics -- actually realized prices, rather than the list prices which Stigler and Kindahl recently demonstrated are often considerably different; more promptly available labor statistics -- on which examples are unnecessary; more cross-classified labor statistics so that relationships among factors can be traced more confidently -- these and more are needed. It is not true that "what you don't know, won't hurt you." The labor statistics that a country or state or province collects and publishes indicate the concern its authorities feel for the well-being of their people.

I have been stressing the value of statistics. But I have also admitted that statistics cost money. It is therefore incumbent upon us to do everything we can to enlarge and improve our statistical information in the most efficient way.

This means, first, discarding series or surveys that have outlived their usefulness, and replacing them with information more relevant to current needs. This is a world not only of scarce resources, but also of continuous change in industrial structure, in forms of business organization, in methods of compensation, in the character of jobs. We must constantly ask ourselves whether we are getting the information we really need.

We need also to search for and apply new methods, new technologies, and new equipment. Some years ago, when I was studying productivity in government, I was impressed by the energy and resourcefulness of the Bureau of the Census in helping to develop and then making use of modern sampling procedures and mechanical and electronic computers. By cutting the costs of its current operations, the Bureau managed to obtain substantial funds for its new projects.

A third way of increasing efficiency is through better internal organization and better cooperation among agencies. I wish particularly to emphasize the importance, in dealing with national problems, of cooperation among state or provincial and federal agencies. Most of our major problems are, in fact, national or at least regional. Some of the developments I have already referred

to -- increases in income, and technological developments in transportation and communication, for example -- have stimulated interstate migration. The United States (and I expect Canada and Mexico also) is now more than ever a national market for labor. The inner-city problems of the Northeast, for example, are related to the technological unemployment in the farming areas of the Delta States.

At an earlier point, I referred to self-discipline, benevolence towards others, and reliance upon oneself, as factors in the quality of life. Consideration of these factors raises wide-ranging questions on the division of responsibility among government, philanthropy, and the pursuit of self-interest in promoting the well-being of the community.

These broad questions deserve notice even in our discussion. But I can take the time to say, only, that no one could honestly deny the need for all three -- the pursuit of self-interest, the use of voluntary associations, and collective action through government; that the optimal distribution of responsibility among them varies as times and conditions change; and that the increasing complexity of society has thrown more responsibility than might have been appropriate in earlier days on the governments of today. We have long since left behind us the belief that unemployment, for example, is largely the result of a weakness of will on the part of the person unemployed. The increased population density and higher degree of urbanization that economic development has brought, the greater economic interdependence that has resulted from the finer division of labor and technological progress -- these have posed new problems at the same time that they have helped to solve old problems. As information has accumulated and understanding determine the growth, fluctuation and distribution of the nation's income has deepened, we have come to realize why economic development has widened the proper role of government. We also have come to see the powers of government to discharge its broader responsibilities strengthened by improvements in technology, knowledge, and organization.

This is not to deny, however, that it cannot be the job of government to solve all the problems of our age; that too often more is being promised than can or ought to be delivered; that -- to recall the example Irving Kristol used 3 years ago in addressing this conference -- the problem of beer cans on our highways is solved less well by turning the job over to sanitation departments (and thus diverting to the task resources badly needed elsewhere), than by all of us learning that it is wrong to litter the highways. The lesson could also remind us of the satisfaction that can be derived from the exercise of self-restraint.

The task, of course, is to devise social arrangements that will enlist the great powers of government to meet the problems we all recognize must not be neglected, yet at the same time permit and encourage the individual to join in the effort. In this way, he can benefit not only from the help he receives but also from the help he renders himself and from the satisfaction he finds in his own endeavors. The current study and discussion of the negative income tax is a welcome sign that we are facing up to this task.

The quality of life -- how do we express what is in our hearts when we hold our little ones in our arms and wonder what the future holds in store for them? We fumble for words and ask the poet to sing for us of the "Sweet Delight" we hope for them. But when he sings, he sings also of the "endless Night" to which so many will be condemned.

When the theme is the quality of life, sentiment has its place even in a meeting of hard-headed statisticians. Permit me, then, to read in full the verse by William Blake from which I have just quoted:

"Every Night and every Morn,
Some to Misery are born.
Every Morn and every Night,
Some are born to Sweet Delight.
Some are born to Sweet Delight,
Some are born to endless Night."

How many will be born to Sweet Delight will be influenced, we know, by forces outside the control of men, but not by these forces alone. To a significant degree, there is something we can do. What will happen to the quality of human life will depend also on how we define it, on how well we come to know ourselves and our society, on how soundly we build or rebuild the social arrangements under which we live together. In carrying out these tasks, statisticians -- labor statisticians -- have a role to play. It is a small role, let us grant. But surely we may claim it is a vital role.

WOMANPOWER: A NATIONAL RESOURCE

Elizabeth Duncan Koontz, Director
Women's Bureau
U.S. Department of Labor

For this particular conference to consider the role of North American women in the '70's, is most appropriate because the use we make of our womanpower resources may appreciably affect the quality of all of our lives.

Before we talk knowingly about improving the quality of life, perhaps we should think a moment about what we mean by this phrase in connection with labor conditions. Are we confining ourselves to employment and unemployment and to wage scales and earnings in relation to the cost of living? Or are we, as I think most of us feel, talking about the rewards which each person feels or finds in achieving a productive life best suited to him or her and the contributions to society which these satisfied workers are capable of making? From this latter point of view let us discuss where statistics on women workers have helped us in the past and decide where we still have stumbling blocks in the road.

Statistics by themselves do not do anything. They are used by people -- people with emotions and prejudices as well as with brains and good will. They can be used selectively to buttress an already determined policy or position, or they can be used to search for truth --- to serve as tools to open our minds and hearts to changing roles and changing conditions.

How true this is of statistics on women and women's employment. We have come a long way, thanks to you statisticians, in dispelling some of the myths about women workers and the patterns of women's work lives. We still have a long way to go before we reach general acceptance of women workers as individuals.

The salient fact about women workers today is that they represent a cross-section of American women. They run the gamut of aptitudes, abilities, and temperaments, and their work motivations are just as varied. In this, they differ from the women workers of a generation ago. Since it was much more unusual for women of previous generations to work outside the home, they were a much more homogeneous group of women in age and occupations and work motivations as well as work life patterns.

Things are different now. But many otherwise quite knowledgeable persons still think of women workers in terms only of a few limited types of jobs -- usually those oriented toward serving people and never those associated with decisions, responsibility, or profits. Many people still think of women's lives as totally committed to either career or home, with no interchange between them. This simple view of women's lives disregards not only the very large group of married women with children who return to work after their children are all in school but also the many women who, because of divorce, separation, or death of their husbands, must carry on a dual role of worker and homemaker in order to support their families.

The old stereotypes are certainly applicable to an ever-diminishing proportion of women. The real crux of the matter is whether we are still acting on invalid assumptions restricting the choices of all women, and whether we need to change policies or practices to expand their choices. Can statistics aid in pointing out the changing conditions which call for new answers and new ways of thinking? And by widening the horizons for women workers and potential workers, can we improve the quality of life not only for women, but for their families, their communities, and the Nation as a whole?

Statistical findings have certainly aided us in recent years in moving towards these goals by documenting changes which our own imperfect observations have just begun to indicate and by measuring the extent of variances, sometimes unsuspected, in the experiences of specific groups of women. For example, the significant part which paid employment occupies in the lives of a surprising number of women has been documented by a study of work life expectancy of women which shows that a married woman who returns to work at age 35 after her youngest child is in school will probably work for 24 more years. Such studies illustrate the crying need for training and retraining these women if they are to hope for job satisfaction and a chance to progress to work above the lowest level of entry jobs. I might also mention in this connection the job tenure and mobility studies which, by analyzing differences according to age, occupation, job level, and other variables, give evidence that much of the high turnover rate imputed to women is a result of factors other than their sex. Such studies offer important food for thought to the employers reluctant to spend their training funds on women workers.

Our knowledge about the work patterns of black women and their special employment problems has been immeasurably helped by the increasing availability of statistics by color or race. The combined Census and Bureau of Labor Statistics studies of the economic and social status of Negroes, the unemployment and earnings figures, all point to the very different position which black women workers occupy -- their strong labor force attachment as compared with white women and their higher unemployment rates and lower earnings than either black men or white women.

More penetrating analysis of the particular ways in which black and white women workers differ and of the variables which influence these differences is being made by the Ohio State University Center for Human Resource Research in its "Longitudinal Study of Labor Market Experience of Women 30 to 44 years of age" -- the Parnes study, funded by the U.S. Department of Labor. Since black women are overrepresented in the sample, the findings should provide statistically reliable information on their employment problems. We look forward to the insights which a 5-year study of the same respondents will reveal, but already the first report indicates, for example, that the black woman's relatively high lifetime labor force participation rates pay off in higher wages only for the white-collar worker. Among black women blue-collar workers, the mean hourly rate of pay of those women who had worked 75 per cent or more of the time since leaving school was only 4 per cent higher than that of women who had worked less than 50 per cent of the time. Among black women in service occupations, where 40 per cent of those in the study were employed, there was virtually no difference at all. What a fine incentive that is to encourage young workers to stay with their jobs!

I think another important milestone has been the development of statistics on poverty, the incidence of poverty, and the characteristics of those who live in poverty. We recognize the great importance of the poverty index developed by Molly Orshansky of the Social Security Administration -- now used by Census and the Bureau of Labor Statistics and adjusted annually according

to price changes. The revelations of these data concerning the severity of poverty among families headed by women, particularly black women, have given added impetus of our efforts to expand child care facilities and to make realistic provisions for the poor, including the working poor. How shocking it is to learn that among black women family heads who worked full time the year around, almost three out of ten were still living in poverty.

We have made great progress in examining the pockets of misery existing in the central portions of some of our largest cities. The Urban Employment Survey in revealing the extent of unemployment and non-participation in the labor force in such areas helped us get on with the job of finding answers.

Unemployment data has also been much more valuable in the last 5 years since it includes information on the ways in which men and women move into the ranks of the unemployed -- that is, by losing or quitting a job or by a decision to enter or re-enter the labor force. The extent to which the unemployment rates of women and teenagers are affected by their status as entrants or re-entrants into the labor force has stimulated our efforts to examine how well we are educating and training our young people and women to bridge the gaps between school and work and between family life and work.

We need to take a brief look at remaining gaps in our knowledge. Our Commissions on the Status of Women in all the 50 states have moved ahead on many fronts to improve the quality of lives of women in their respective States. But they have been hampered by the lack of local data -- nationwide summaries are not very useful at the local level. Women union members, too, are working together as never before to meet the particular needs of their own local situations. They too need to be armed with current facts.

We also need to know more about employment opportunities for women and how women are represented in new and developing occupations. Are we forging new patterns and expanding the choices for women workers in fields such as data processing and urban and environmental planning which are not hampered by previous traditional structures of "men's and women's jobs"? What about the place of women in new technician occupations, new sub-professional jobs, new types of apprenticeships? Can the functions of individual jobs in an occupation be altered to meet more adequately the needs for both men and women to progress up a career ladder? I believe these considerations are vital today when we consider the frighteningly high unemployment rates of our teenage girls -- particularly black girls of whom 3 out of 10 were unemployed in April, 1970.

This type of reserach suggests the need for estimates of the cost to the Nation of the lost opportunities of women -- the loss of the unused services of women not in the labor force and the loss of inappropriately or inefficiently used services of women workers.

The first task of such research is perhaps to find out more about the loss we are incurring of the talents and services of many women who do not participate in paid employment or responsible community service because they have been trained to underestimate their own value for any services outside the family circle. We are talking here primarily of those women who have completed or have had no childrearing tasks and could use their talents more fully, given the confidence and the encouragement to do so.

There is another group of women who never have a chance to know the pride of being independent wage-earners. I am referring to the young girls who drop out of school when they become pregnant. Here is another tragic cost to the Nation. The probability that these unwed mothers and their children will have to be supported by welfare funds may be greatly heightened by their lack of

education or training to qualify for jobs. Does inadequate schooling also increase the chance of recidivism -- the possibility of their having more illegitmate children? We need more data on these points. We need to assess the total cost to society of the loss of their services as workers and taxpayers and the cost of support balanced against the cost of maintaining these young women in school or training programs and providing them with adequate counseling and family planning services.

Turning to women who do become workers, let us explore the losses we incur when they are discouraged from seeking the jobs which will develop their full potential. Do they settle for routine, low-paid and unsatisfying jobs because they underestimate their talents or because they have been trained to develop only "feminine" talents. Is the gal with the keen eye and the steady hand restrained from using them for complicated surgical techniques or architectural drafting, but encouraged to develop them for typing your statistical tables or assembling electronic equipment?

A letter I have just received gives very interesting testimony on this point which I want to share with you. A male astro-physicist who has had many years experience teaching mathematico-physical subjects in both coed and women's colleges writes: (I quote) "Essentially girls have been taught to 'hate mathematics' by cloistered professional teachers who refuse to realize that, whatever a girl may do in later life, she must be able to add and subtract, take fractions and percentages. Even if she is a multimillionheiress she will join in the conversation only to say 'I never was very good in math. But this professor finds that, despite this brainwashing, women have no difficulty grasping rather abstruse facets of mathematics, physics and astronomy and their pertaining philosophies, and he concludes therefore (and I quote): "I believe that we are wasting so much of our female brain-power .... I am on the band wagon!"

We also need to study the occupational changes which take place over women's working lives. Is there a deterioration in occupational status, as indicated by some Parnes report findings, during the course of a woman's working life because of marriage and family responsibilities? Are we thus losing the full talents of many workers? Do our budding astro-physicists end up after all as supermarket checkers or statistical clerks? How can we assess this National cost?

Still another aspect of women's employment that it would be well to investigate is the cost to the Nation of the thousands of women in dead-end jobs. What proportion of women workers are caught in such a situation? Can we pinpoint the factors which keep them there?

This is just part of the general problem of upward mobility which we need to study. We need more extensive information about the loss of earnings to women and their families attributable to differences in job-level and in pay between men and women workers of equal educational attainment and work experience. The Parnes study, as already indicated, is providing some of the answers and will provide more as succeeding reports are made. How can we measure the effect of these relationships on the job satisfication of women workers as well as on the material well-being of the workers and their families?

All of these problems and lost opportunities can best be illustrated by the plight of women private-household workers: the dead-end jobs, the low pay despite years of service, the lack of security, and the differences between

the pay of women in this occupation and the earnings of men in other service or blue-collar jobs. We think therefore that intensive research on the economic status of private household workers is indicated.

These are but a few of the areas we see at the moment which call for research in order to identify the problems of women's employment. But I would like to add one more which has to do with the unpaid services of volunteer workers. There is a natural interplay for women between meaningful community service with voluntary organizations, part-time employment, and full-time employment. But we do not have a great deal of information about volunteer work. What types of functions are best performed by volunteers? Who are they and what motivates them to donate their services? Where does volunteer work fit into the total picture of employment to best improve the quality of life? How can we assist the transitions women make between volunteer work, part-time work and paid full-time work? Can these transitions be simplified to serve the needs of women at whatever stage of life they happen to be and to increase the rewards to the women themselves, to their families, and to society?

What it all boils down to is a belief that the quality of our lives will best be served by removing arbitrary restrictions on the work choices of women. We realize, of course, that for some women the choice of work is dictated by acute economic need. For these women we must make provision for either adequate child care arrangements or other means of economic support so that they are not forced to struggle with dual workloads. When we have done that perhaps we can stop worrying about why women work and begin to offer women the dignity which most men have -- and we hope all men will -- of making their occupational choices according to their own aptitudes and interests and of being hired, fired, promoted, and paid, not on the basis of supposed need or lack of need, but solely on the basis of their own skills, abilities, and performance.

THE LABOR FORCE; THE G.N.P.; AND UNPAID HOUSEKEEPING SERVICES

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The sense of frustration and injustice which has sparked the social revolution of women in the United States and Canada has its roots even in fields which are not yet too well known to the women themselves. The failure of economists and statisticians to include for purposes of gross national product the value of unpaid services provided by women within their own homes and the failure to consider women working in their own homes as persons actively employed in the labor force, have contributed to a state of affairs which is somewhat paradoxical. To illustrate, I would draw your attention to the tongue-in-cheek four-line verse which appeared in the Canada Labour Gazette, in a column headed "From the Women's Bureau", which concerns the Labour Force Components:[1]

> Through women in labour
> Life keeps on its course;
> But mothers don't count
> In the Labour Force!

Insofar as the omission of unpaid domestic services from the calculation of national income is concerned, the paradoxical state of affairs was illustrated by a noted economist[2] when he gave the following classical example:

> If a number of bachelors who were employing housekeepers in the customary manner of exchanging services for money, decided to marry these housekeepers, then the national dividend would be diminished! Obviously the housekeeper, when assuming the role of a wife, regardless of any additional services she assumed by virtue of her marriage, continued to perform those services which she, as a housekeeper, had been performing previously. In other words, the services continued but the value disappeared!

The subject of this conference, "The Role of Labor Statistics in the Quality of Life" provides an opportunity to place before an audience the proposal that social benefit, as well as statistical and economic good sense, would flow from a revision of established procedures relating to the present

[1] Canada Labour Gazette, January 1970, p. 63
[2] A.C. Pigou, The Economics of Welfare, 1946.

methods of computing the size of the "active labor force" and the total value of services making up the Gross National Product. Specifically, it is proposed that housewives should be included as one of the occupational groups making up the active labor force; and an inputed value of the cost of specified unpaid domestic services which they provide in their own homes should be included in the Gross National Product.

One of the social benefits which would flow from the adoption of these proposals would be the broadening of a number of social security programmes, which at present giving entitlement only to persons in the active labor force, so that housewives who are engaged in providing specified domestic services, would also be entitled to an equity in such programmes. Labor force statistics during the last few years provide evidence showing that the largest influx into the labor force consists of women in age groups which would indicate that, for some years, they had been engaged solely as housewives carrying out domestic services in their own homes. These women, who would be re-entering after a period of absence or entering for the first time into the active labor force, as at present defined, lack advantages earned by those who have been in the active labor force over a period of years.

An example of a Canadian programme of this type is the Canada Pension Plan. This is a federal social insurance programme to which employees and self-employed persons contribute, and thereby earn rights to a retirement pension at the age of sixty-five. It is geared to persons in the active labor force. Thus, a woman entering the labor force after a period of years, during which she was providing unpaid domestic services in her own home, is at a definite disadvantage as compared to persons who during those years were providing paid services in the open market. If, as a housewife carrying out her own domestic services, she had been considered to be in the active labor force, she might have been given the opportunity to pay into the Plan. On seeking employment outside of her home, she would bring with her the equity in the Plan to which she had been contributing.

Similarly, allowances provided under an Adult Retraining Programme in Canada are available to persons who have been attached to the active labor force for a period of 3 years. Because housewives are excluded from the labor force, they are not eligible for these allowances. Yet the retraining of this important segment of the working population would contribute to the fuller utilization of manpower resources.

Another benefit of social significance, although of less material importance, would be the contribution it would make towards a more positive psychological attitude on the part of society to housework services, not to mention a more positive attitude of housewives themselves to their own domestic services. The belittling of the role of the housewife and of household domestic service has been responsible, in no small part, for many of the dissatisfactions being experienced at the present time, particularly by some younger women who might well have found satisfaction in choosing such a role but for prevailing attitudes.

On the international scene, it goes without saying that there are substantial advantages to be gained by providing more realistic international comparisons, both with regard to the components of the "active labor force" and with regard to the actual size of the Gross National Product. At the present time, in spite of international definitions relating to the components which are to be included in the "active labor force," many countries, particularly the less developed industrial countries, do not strictly adhere to these definitions.

For some years the International Labour Organization has recommended caution in making international comparisons of the economically active population on the grounds that:

> ... differences in the definitions of the economically active population used in various countries should be taken into account. In particular, the activity rates for females are frequently not comparable internationally, since in many countries relatively large numbers of women assist on farms or in other family enterprises without pay, and there are differences from one country to another in the criteria adopted for determining the extent to which such workers are to be counted among the economically active.[3]

A close examination of the number of women included by some countries, particularly industrially underdeveloped countries, bears witness to this difference in the interpretation of established definitions. Some countries show the number of the economically active women to be such a large percentage of the total population of the country, that one may only conclude that the stated number must include a substantial percentage of women engaged in unpaid domestic work in their own homes.

The problem of including in the national product the value of unpaid domestic services is not the same as that pertaining to the labor force definition; it has been studied by economists for years. The classical and initially accepted criteria for the components were clearly enunciated by a professor of political economy at Cambridge[4] who, in discussing the calculation of the national product, stipulated that the value of services which people render to themselves and their families should be excluded from the reckoning. Among these services, of course, were unpaid housework services.

But housework services were not the only ones to which this noted economist referred. There were others of a similar nature relating to non-market items. In those cases, however, it was agreed later that concessions would have to be made; for while the measuring rod of money was not literally applicable, the value of the production could not be overlooked. For example, concessions were made in the case of agricultural earners who, having produced agricultural products, consumed these at home without putting them on the market; similar exceptions applied to owners of real estate who themselves occupied some of their own lodgings.

In these cases, the economists conceded that it was possible to impute to the services a dollar value for purposes of the national product. Clearly, therefore, the original principle of totally excluding the value of services which people render to themselves, has not been adhered to in all circumstances. Nevertheless, it continues to be adhered to with regard to the domestic services of housewives.

Even before the turn of the century, some Scandinavian statisticians disagreed with the principle of excluding all non-market items; both Norway

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[3] ILO Yearbook of Labour Statistics, 1969, table 1.

[4] A. Marshall, Principles of Economics, 1930.

and Denwark made an attempt to include an imputed value for unpaid housework in the national reckoning, but apparently they did not persist in the attempt.[5]

After the First World War, the exclusion of the value of unpaid housework as a service once more became a matter for consideration. During the war, women who had been providing paid domestic services moved out of domestic services and into the munitions factories. The domestic's former housework services were then taken over by a housewife who, until then, had not performed those particular services in her home. Insofar as the national dividend was concerned, this shift did not have a significant effect except, perhaps, through somewhat higher rates of earnings. However, after the war, the former domestic who had been employed in the munitions factory, went to her own home where she performed the type of housework services she had formerly performed for money.

Now instead of one woman providing domestic services as had been the case before the war, there were two women performing these services. Nevertheless, as a result of this shift the national income was decreased! The total amount of services, though augmented in relation to the prewar situation, were reflected in the national product as a decrease in services.[6]

In 1921 an estimate of the value of housewives' services was made by the United States National Bureau of Economic Research. Conjectural estimates for 1918 placed the value of such services at 25.1% of the Gross National Product.[7] A later study made by Professor Simon Kuznets elicited an estimate slightly in excess of one-fourth of the total national income in 1929; the total amount calculated by Kuznets was some 23 billion dollars for that year. While pointing out the problems inherent in calculating the productive activities of housewives in the same manner as other economic processes, Profesor Kuznets felt that they should be considered in any attempt to indicate the net product of the social system.

Another important effort was made in the thirties to find some acceptable method of including these services in national accounting by a Swedish team whose studies[8] suggested two estimates: first, an estimate of the value of domestic work performed by paid servants including agricultural work; and second, an estimate of the domestic work of wives and daughters in the homes. The Swedish group proposed to place a value on the domestic work of wives and daughters on the basis of wages paid to hired female servants. Unfortunately the investigators were not satisfied with the results of the evaluation.

Quite recently a British economist estimated that the value of unpaid household services in industrialized societies amounted to 44% of the national product on the basis of production for the market. He outlined a method by which a value might be imputed to housework. He pointed out that, because of better household equipment, efficiency in household services had been increased and productivity had greatly improved; the same services were now being provided by fewer housewives, as increasing numbers of women were taking up paid employment. In spite of all these factors and the magnitude of the unpaid

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[5] Colin Clark, "The Economics of Housework," Bulletin of the Oxford Institute of Statistics, Vol. 20, No. 2, May 1958.

[6] A. L. Bowley, "The Definition of National Income," The Economic Journal, Vol. XXXII, March 1922, p. 3.

[7] National Bureau of Economic Research, Income in the United States, its Amount and Description, 1909-1919, p. 59-60.

[8] E. Lindahl, E. Dalgren, Karin Kock, National Income of Sweden, 1861-1930, Part II (1937).

serviced provided, he noted that still "the very existence of this tremendous amount of work is ignored both by the general public and by traditional economists."[9]

Within the last few years a number of economists have expressed similar views, such as the following:

> It is clearly arbitrary to include in the national product only those services performed in the home by hired employees, but not the same services when performed by family members -- Not to recognize the value of these productive services is a source of serious bias in the national product ...
>
> ... housewives have increasingly entered the labour market as employees receiving a monetary income. Failure to include the value of services rendered in the household by family members thus not only understates the national product and income, and gives false impression of the proportion of total output originating in business, but also biases seriously all measures of the long-period trend in national product.[10]

One of the most recent efforts to achieve a GNP imputation of the value of housewives' services, was described only 2 years ago.[11] This study estimated the value of housewives' activities in the United States in 1964 at about 24 percent of the GNP.

The economists who have been endeavouring to solve this problem have not been indifferent to the obstacles which have to be overcome. The main difficulty appears to be the problem of measuring volume of production. There are also difficulties relating to the conditions under which such services are carried out as well as a recognition of the factors that affect the amount of income represented by them. Nevertheless, it has been noted that to ignore such unpaid services "would distort the significance of the level of living insofar as it may be interpreted by reference to the real wages." [12]

Although the precise extent of unpaid domestic services in industrial countries is not known, it is obvious from those estimates which have been made, particularly where these have been on the basis of equivalent values for paid domestic services at market rates, that they represent a substantial percentage of national income. It is likely that even if such estimates were to

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9 Colin Clark, "The Economics of Housework," Bulletin of the Oxford Institute of Statistics, Vol. 20, No. 2, May 1958.

10 Gardner Ackley, Macroeconomic Theory, (1961), p. 55, 56.

11 Ahmad Hussein Shamseddine, The Economic and Business Bulletin, Summer 1968 issue (Philadelphia, Pa.: Temple University).

12 United Nations, Report on International Definitions and Measurement of Standards and Level of Living, (1954), p. 21, 22.

be made on the basis of a purely arbitrary figure less than that of comparable market value, they would still represent a significant percentage of national income. But whatever method is formulated to impute a value to the domestic services of housewives for purposes of national accounting, a clear line of demarcation would have to be drawn between those household services which may be described as "economic" and those which result from the general activity of life.[13] The latter would not, of course, be included in the formula.

The suggestions which have been made in this paper are admittedly of primary concern to an international rather than to a national audience. Although action on a national basis might have the affect of stimulating international action, it would obviously be preferable to bring to the attention of the international bodies concerned the question of redefining the components of the active labour force and the Gross National Product so as to include, respectively, housewives and the value of their domestic services.

While these problems may not be coming to the fore for the first time now, they are of some urgency at this time because of the social changes taking place at such rapid speed in our time. The change in the role of women in society and the emergence of older women in the labour force both lend urgency to an early solution of the questions outlined in this paper.

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[13] Thomas F. Dernburg, Duncan M. McDougall, Macro-Economics, (1960, Revised 1963), p. 34, 35.

DISCRIMINATION IN EMPLOYMENT

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Discrimination in the labor market has received considerable attention the last two decades. Racial aspects have been a primary concern, but the question of discrimination against females has assumed an increasing importance in recent years. One obvious reason for this is the sex amendment to title VII of the Civil Rights Act of 1964. More fundamental, however, is the expanding role of women in the labor force.

Controversy over the existence and extent of discrimination on the basis of sex is widespread. A wealth of information on legal aspects has appeared since 1964, but there is a paucity of empirical evidence, relative to that related to race. This afternoon I would like to focus on one aspect--mainly, wage discrimination. This is, of course, only part of the problem, but a part which should be measurable to some extent. After commenting briefly on observed differentials, I will turn to some research findings.

For the most part, the statistics cited as evidence of wage discrimination are median earnings reported in Census data, or occupational earnings in particular industries or areas from studies made by the Bureau of Labor Statistics. By way of example, gross comparisons based on Census data indicate that in 1966, the median wage or salary income for female year round full-time workers was only 58 percent of that of males. Moreover, the gap has been widening in recent years. The gap varies considerably by broad occupational groups, but within most of these groups, the relative earnings position of women has deteriorated since 1956.

These comparisons are, of course, gross--and while striking, are not conclusive evidence of the existence or extent of wage discrimination. For example, within a broad occupational group, females tend to be concentrated in the relatively lower paying jobs. This suggests that comparisons of wages should be made at a finer occupational level. Moreover, observed differentials within narrowly defined occupations could be explained by factors other than sex, such as those related to worker quality or the establishment of employment. It has been alleged by some that wage discrimination is illusory in that adjustment for such factors would eliminate the observed earnings gap. However, there is a reverse argument. If in fact, females are of quality or located in high wage establishments, the true wage differential may be obscured in gross comparisons.

Surprisingly, there has not been extensive research in this area. This is due perhaps in part, to the relatively new prominence of the subject, but more certainly to the difficulty in obtaining reliable--but inexpensive--data. One refinement of wage comparisons is that made by Henry Sanborn. 1/ He examines

1/ Henry Sanborn, "Pay Differences between Men and Women," Industrial and Labor Relations Review, July 1964.

differences in earnings between men and women in 1949, using 1950 Census data for detailed occupations. The average gross differential is 42 percentage points. He attributes much of this to factors such as occupational distribution, hours worked, education, age, place of residence, and race. After successive adjustments--not all of which operate in the same direction--the sex income differential is reduced to an estimated 13 percent.

Further insight into the complexities of the sex-wage differential emerges from a recent analysis of occupational earnings made by Donald J. McNulty.[2] He examines wage differentials for eight office and three plant occupations using data from BLS surveys of occupational earnings. These were conducted in 84 metropolitan areas between July, 1965 and June, 1966. He finds that if comparisons of men's and women's occupational earnings are made within establishments, the variations are substantially lower than indicated by the establishment averages, because of the wide variations of pay levels between establishments. At the all-establishment level, men's earnings exceed women's in each of the eleven oocupations. The amounts range from 5 percent (for office boys and girls) to 36 percent (for order clerks) in the office occupations. In plant occupations, the range is from 17 to 44 percent. A unique finding is that the wage advantage of males in establishments that employ both sexes in the same occupation is below that in all establishments. For example, among class A accounting clerks, men earned 23 percent more than women in establishment employing only one sex in the occupation. In contrast, in establishments employing both sexes, the male advantage was only 12 percent. This does not appear to result from differences in pay between men working in establishments differing in sex composition of the occupation but rather from differences in pay levels of women, that is women working in an establishment with only women in the occupation earn less than women who work in establishments with a mixed sex composition in the occupation.

The last findings I would like to present come from an analysis [3] of wage discrimination in the Chicago area in 1963. The study includes workers in four narrowly defined occupations in a random sample of 75 firms in the Chicago-Northwestern Indiana Consolidated area. The occupations are accountant, tabulating machine operator, punch press operator, and janitor-janitress combined. The data related to individual workers came from company personnel records and were collected as part of a larger study of the Chicago labor market [4] directed by George Shultz and Albert Rees. The purpose of the analysis is to isolate "pure" measures of wage discrimination on the basis of sex. The measures are "pure" in that factors other than sex, to which wage differentials might be attributed, are taken in account. These include individual differences in worker quality associated, for example, with age, education, experience, training, and seniority, and differences related to the establishments where the individuals were employed. The latter include size, unionization, location, etc.

The differentials were estimated by multiple regression techniques which allow for the simultaneous influence of other variables. The observations are from individual workers. The dependent variable is wage per hour at work--that is, adjusted for days of vacation and paid holidays. The sex variable enters as a 0,1 dummy. For each occupation, two estimates of the sex-wage differential were made. The first relates to wage differences after standardization

[2] Donald J. McNulty, "Differences in Pay between Men and Women Workers," Monthly Labor Review, December 1967.

[3] Mary T. Hamilton, "A study of Wage Discrimination by Sex: A Sample Survey in the Chicago Area," (Unpublished doctoral dissertation, University of Pennsylvania.)

[4] Albert Rees and George P. Shultz; with the assistance of Mary T. Hamilton, David P. Taylor, Joseph C. Ullman, Workers and Wages in an Urban Labor Market. (Chicago, Ill.: University of Chicago Press, 1970.)

for individual characteristics. The second estimate takes into account differences between establishments where employment is located as well.

The results clearly suggest that wage discrimination has a sex dimension. The sex variable is consistently powerful in explaining wage dispersion. The estimated hourly differentials as a percentage of the wages of males in the occupation, range from 8 to 17 percent in regressions using variables relating to individuals, and from 10 to 17 percent in those including establishment variables. In both cases, the high estimate is for janitor-janitress combined--an occupation where there is some possibility of differences in job content. For example, the janitors may work outside at night whereas the females may be office cleaners. The next high estimates were for tabulating machine operators --approximately 13 percent. With the exception of accountant, the estimated differentials exceed the actual differentials. This suggests that within the sample, women tend to be of higher "quality" in some sense and are disproportionately concentrated in high wage establishments.

Of particular interest is that the sample distribution in two occupations permits a comparison of sex and nonwhite differentials. In both of these, punch press operator and janitor-janitress, the estimated sex differential is considerately larger than that attributable to color. A finding that it costs more to be a female than a nonwhite is startling. However, it is supported by the magnitude of estimates of the nonwhite differential in additional occupations included in the complete study.

It was also possible in the janitor-janitress sample to compare the estimated sex differential for whites and nonwhites. If variables associated with the establishments of employment are taken into account, the estimated differentials are quite similar. However, these are measured relative to wages of wages of males of the same color. If the comparison is made between all female and male wages, the relative wage disadvantage of the nonwhite female is greater than that of a white female as a result of the combined differentials attributable to sex and color.

In conclusion, it should be emphasized that wage discrimination need not take the form of different wages for identical work. The employment of workers of different quality for the same wage seems more plausible--and certainly less visible. What evidence there is suggests that wage differentials attributable to sex do exist. This says nothing, however, about other aspects of discrimination such as entry to jobs with upward mobility. It seems clear that there is a need for more data and more research on this subject. The latter should focus not only on empirical aspects but also on theoretical issues, since these are likely to figure importantly in prescribing appropriate public policy.

WOMEN ALONE AND YOUTH

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"Womanpower: A National Resource," is a very fitting and descriptive title. To me it represents a thumbnail definition of our position in exploring an area which is becoming increasingly charged with emotional and ideological rhetoric. A line of demarcation seems therefore useful, and we should make it clear that our approach to the many problems of the working man is concerned, constructive, factual and forward looking.

Womanpower is an underutilized and underrated national resource. The woman's recognition, responsibility and reward in relation to her work are predetermined by the criterion of who the performer is rather than of what or how good the performance is. We realize this is an anachronistic and an undemocratic concept. It contradicts the very idea of a competitive society, where neither social economic nor personal status are supposed to determine the individual's right and opportunity to compete, but solely his or her willingness and ability to compete. At the same time, we also know that such a condition, not unlike similar situations of discrimination, carries the seeds of self-perpetuation: the denial or diminishment of equal opportunties and rewards tends eventually to stifle individual aspiration and initiative. This lack of these qualities, in turn, is then cited as argument to justify the denial or diminishment of equal opportunities and remunerations.

The woman must break out of this depressing cycle. Her task in America today is to secure her rights and to prepare herself to exercise those rights. She must realize that neither abilities and qualifications without equal opportunity, nor equal opportunities without qualifications and abilities are enough.

This is the challenge she faces now. This is her part in America's unfinished business. It circumscribes our research task. It means that we have to find, to analyze, and to report the facts of a situation as it is in order to bring about a situation as it should be.

In three recent small-scale projects the Oregon Bureau of Labor tries to explore three different and significant aspects of the situation as it is. In each of these instances, our guiding philosophy and concern followed closely the thought reflected in the title of this discussion her today -- that a fuller, fairer, more meaningful, and more rewarding development of the working woman's potential is not only a matter of her own individual and social progress but also of that of the society of which she is part.

The first of these investigations, -- upon which the report They Carry the Burden Alone[1/] is based, -- looked into the social and economic living conditions of Oregon's working women who are heads of households. Although may be the wives of husbands who for various reasons are unemployed or underemployed,

1/ Dr. Eric J. Weiss, They Carry the Burden Alone: The Socio-Economic Living Pattern of Oregon Women With Dependants (Oregon Bureau of Labor, 1968).

for the most part these women consist of divorcees, widows, or separated or deserted wives who have to support themselves and their families. Our study showed that in 96 out of 100 cases the families consist of the woman's children. The investigation confirmed what we more than suspected, that while most Americans move forward within the mainstream of great opportunities, richer rewards and more meaningful pursuits, a large proportion of employed or employable women with the unshared burden of family responsibility remains in the stagnant backwaters where jobs demand little in skills and offer less in rewards. Being heads of families, they frequently play the part of the proverbial pebble thrown in a pond: the rings of depression around them are likely to encircle those who are their dependents.

While this was not startling news, the documentation with the facts, the figures and the feelings graphically expressed in the comments of the female survey participants, generated enough public awareness and political momentum to produce some important new legislation. The two most notable examples are the first law which was enacted by Oregon prohibiting discrimination in employment because of sex and new tax provisions so that the working woman without husband present can deduct for child care expenses regardless of the amount of her income.

The problem of adequate and inexpensive child care appeared as one of the major factors in limiting the working woman's freedom of choice as a competitor on the labor market. Of even more restrictive impact upon her freedom in seeking and accepting employment was her comparatively narrow range of qualifications and skills. However, the indications concerning the women's attitude, particularly in the context of the theme of our discussion here were significant and encouraging. Sixty per cent of the participants declared that, given the opportunity, they would take suitable courses or undergo special training in order to improve their educational and occupational qualifications. This remarkable determination shown by working women, who carry the burden of family responsibilities alone, to overcome the roadblocks in their way motivated specific recommendations of the report, to which I may refer to later outside this statement.

A self-imposed limitation on female occupational choices was one of the notable and somewhat disappointing findings in our second project, an exploratory look at career hopes and aspirations of Oregon teenagers, entitled Toward Your Future Job -- Drive or Drift?[2/] While girls between ages 16 and 18 generally were more goal oriented than boys in the same age bracket, their choices revealed that the majority were still thinking in terms of jobs rather than careers. Their orientation showed perhaps more earthbound realism -- unlike their male counterparts they had no future race car drivers or space cadets in their ranks, not even jockeys yet -- but their preferences did not indicate much imagination nor even awareness of existing new career possibilities for women. The majority of those who did choose the professions followed the traditional pattern of yesteryear -- nursing and teaching were their favorites. The principal recommendations of our report suggested a program for teenage girls which agrees in its objective with this statement by the Women's Bureau: "An important part of the answer to the disparity of women's educational attainment and earnings lies in the goals and aspirations of those women when they were girls. Girls need help and guidance in planning and preparing for their roles as homemakers and workers so that they can realize their fullest potential in both spheres."

2/ Dr. Eric J. Weiss, Toward Your Future Job--Drive or Drift? An Exploratory Look at Career Hopes and Occupational Aspirations of Young People in Oregon (Oregon Bureau of Labor, 1970).

In the third phase of our investigation, which is currently underway, we take a close look at the problems of the middle-aged women who are either employed or seeking employment. Within that broad segment of Americans whose age makes them feel or more often actually find barriers to jobs and job advancement, there is a special group of women trying to find some answers to special questions. They are the ones who, after having spent several years fully occupied with household and family responsibilities, decided to join or to rejoin the labor force. We are trying to reach these women -- which is not too easy. Just shortly before I left for this conference, we partially succeeded in breaching the silent wall of non-response with the help of our influential metropolitan daily, The Oregonian, which brought out a well-written article about our ongoing project. Among the many things we want to find out from these women are, particularly, their wishes concerning counseling and training to help them overcome the feeling that they have been out of the running for too long.

In the cover letter which accompanies their special questionnaire form, we try to encourage them in these words: "Let us prepare together the ground for a fuller and wider recognition of the potential represented by you, the women who now seek work outside their homes."

This is what we tell them. And this is what we mean, and this is what we are going to do.

MOTHERS, DAY CARE AND VOLUNTEERS

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My special topic includes working mothers, day care, and volunteers. They are not as unrelated as they may seem. Certainly there is a clear analogy between working mothers and day care but there is also a close relationship between volunteers and the other two subjects.

Many working mothers worked as volunteers prior to entering the labor force and gained valuable experience and skills in their volunteer work, which were later transferrable to paid employment. The efforts of volunteers to promote public awareness of the need for more day care and to actually establish and operate day care centers is well known. It may interest you to know that the National Council of Jewish Women is making a nationwide survey of day care facilities this summer through their local clubs. The survey will be called "Window on Day Care." A summary report will be prepared this fall for the White House Conference on Children and Youth to be held in December.

At this point in time, we are not making adequate use of the talents of working mothers, many of whom settle for less than their potential because of the lack of part-time opportunities in the fields for which they have been trained or because of inadequate child care facilities. What a terrible waste for a woman with a degree in physics to sell ladies hosiery and gloves part-time in a suburban store when she might be making a contribution to our space exploration. What a waste for a woman with a degree in early childhood development to be selling cosmetics door-to-door when she might be part of a team-teaching effort so that she could be working while her children are in school and at home when they are out of school. Then there are the volunteers which could make such a vast contribution to solving some of today's social ills. But they too are stymied by the lack of supportive services such as trained private household help or needed child care facilities.

The increasing labor force participation of mothers with children under 18 has important implications to industry and to the communities in which they live. These mothers, many of them young and well-educated, provide needed manpower for the nation's growth and expanded services to the population as a whole. Their dollars may raise the family income above the poverty level or provide the means for better medical care for the family and more educational opportunities for their children. At the same time the employment of mothers creates a need for special supportive services. Perhaps the most important need is for day care for children under 6. Almost equally important is the need for after school care for children 6 to 13 years of age. Other needed services include better-trained household workers, more convenient shopping areas, better transportation, and safer streets.

Data on working mothers is for the most part inadequate. We do know that nationwide the number of working mothers increased from 8 to 11.6 million in the last decade and that today 4 out of 10 mothers work as compared with 3 out of 10 in 1960. We do know that of the 11.6 million working mothers in 1969, 7.4 million had children 6 to 17 years only, 2.1 million had children 3 to 5 none under 3 and 2.1 million had children under 3. But we do not know the number of

children with working mothers or their ages. The latest data (March, 1967) showed that 19.5 million children under 18 had working mothers with husband present. Of these, 5 million were under 6. But no data is available on number of children among working mothers who are divorced, widowed or separated. Moreover, the kind of child care arrangements necessary for a 1 year old child differs greatly from that for a 5 year old. But no information by single years of age is currently available.

Furthermore, data on working mothers for individual states or local communities is woefully inadequate. When we are asked by a planning agency in Waterville, Maine or a citizens group in Little Rock, Arkansas how many mothers with children under 6 work in that State or that city, we do not know! Certainly information from the 1960 Census of Population is out of date and it will be many months before we obtain this kind of data from the 1970 survey. And that information will probably be out of date when it becomes available.

Moreover, we know very little about the number of mothers who would like to work and have skills needed in today's economy but cannot work because of lack of child care services. In the survey of 10 poverty areas in large American cities in November, 1966, respondents who were not in the labor force were asked the reason for their nonparticipation. About 1 out of 5 gave lack of child care as their reason. More recently, the same question was asked of female participants in the expanded Urban Employment Survey. The percentage indicating family responsibilities, which for the most part is lack of child care services, ranged from 29 per cent in Atlanta to 41 per cent in New York.

The arrangements that working mothers are able to make for the care of their children also have important implications for the quality of life. These children as well as those whose mothers are ill or deceased, those with mental or physical handicaps, or those living in slum areas with no place to play should have the best care that we, the richest Nation on earth, are capable of providing. But the most recent nationwide survey of child-care arrangements is more than 5 years old. We do have recent estimates on the number of licensed day care slots -- about 640,000 -- but we do not know what arrangements have been made for the remaining 4½ to 5 million children under 6 who have working mothers. A soon-to-be released first report of the Ohio State longitudinal study of women 30 to 44 years of age does provide some data for women in this age group. It shows that only 8 per cent of white mothers and 12 per cent of Negro mothers secured child care in a school or group care center. But much more information is needed on a statewide or community basis for local planning, especially if the proposed Family Assistance Plan is passed by the Congress.

Finally, we turn to volunteers and the role of labor statistics in the quality of life. You are, I am sure, all aware of the President's plan to encourage the use of volunteers in solving some of today's most pressing social problems. He hopes through a creative partnership between the public and private sector to tackle deficiencies in housing and education, develop methods of crime prevention and control, solve the problems of environmental and population control, and so forth. But just how many volunteers there are or what their special skills are is unknown. The number of volunteers in the United States has been estimated as more than 50 million and the average number of volunteer hours per year as 350.

But these figures disagree with the most recent nationwide survey which was made in November 1965. According to that report, 21.7 million persons 14 years of age or over had performed some volunteer work during the previous year. That report also shows most persons spent a relatively small amount of time on their volunteer activities. Nearly half worked less than 25 hours

during the year. How can we estimate the number of people who could help the new family Assistance Plan become a reality or how can we rally our talents to solve the problems of ecology or environmental control unless we have a realistic tally of volunteers who could provide these services?

Intelligent planning for improving the quality of life for all our citizens and especially our children will be possible only through our combined efforts to improve and expand our labor force statistics. (applause)

MEASURING THE QUALITY OF LIFE IN CITIES

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Senior Research Staff
Urban Institute

I am going to talk about some of the Urban Institute's research in urban indicators, some of the background, some of our philosophy, and then will review a paper on measuring the "quality of life" which we have recently completed. 1/

There are many ways in which research may aid our cities. Primarily we can help formulate and evaluate new and better programs. The ability to measure qualities is an important first step toward planning programs and evaluating them.

We look upon social indicators as a subset of this whole measuring problem, part of a wider spectrum of concerns than our present economic indicators. Urban Indicators are one portion of this social indicator movement.

BACKGROUND

About a year ago we surveyed the social indicator field and found that there were many functional groups, at the Urban Institute and elsewhere, working and looking for methods of measuring specific functional areas such as housing, health and financing. Each of these groups were devising better measures for their particular functional area. We also noted that there were many books looking into each of these functional areas in a conceptual way and suggesting improved means of measuring them and for getting better future data in these areas. There are now several data oriented efforts, for example, the President's Goal Commission and the Bureau of the Budget which are preparing social reports. We found them directed toward getting national data, not being broken out by specific cities. We found very little urban indicator data that could be readily obtained and used by generalists: the general public, journalists, labor union leaders, businessmen, community action leaders, concerned citizens and government officials.

There is a large amount of good data available from different organizations such as the Bureau of Labor Statistics and the National Center for Health Statistics; but, nevertheless, it was very difficult for the general audience I described to obtain data useful for them. Experts in different functional areas had data designed primarily for other experts in the same field. It is very hard for a generalist to find the statistics on a given city presented in a balanced fashion.

We concluded that many potential users of urban data did not have access to sufficient data that was meaningful to them. Discussions of urban problems take place in an almost completely qualitative environment.

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[1] The Quality of Life in Metropolitan Washington, D.C. W.P. 136-1, Urban Institute, March 1970.

OUR STRATEGY

Our fist strategy was to see what we could do with data available for the Washington, D.C. metropolitan area. We should get the very best data available in many functional areas and present it in understandable fashion to a general non-expert audience. We would be descriptive, our work would be incremental--we were going to put out a report, let it be criticized, and then improve it.

OUR FIRST PAPER

Our first paper is only a portion of our research in Urban Indicators, but it typifies much of our philosophy in this area. We recognize that there are dangers that imperfect data put out in simple fashion may be misused--as vindicators rather than indicators. We have this danger by pointing out both the conceptual difficulties and data limitations for each indicator.

We are making a first start in a difficult area, putting out numbers so that knowledgeable experts can criticize them. We expect that we will get numerous suggestions for improvement; we have already changed some of our indicators and data.

We also expect that by providing some quantitative measures will produce more intelligent debate. Recently New York City's Mayor released figures to show that the number of people going on AFDC had decreased dramatically during the past month. His opponents said the reason was that the AFDC requirements had been raised unreasonably. Some quantitative measurements in areas where there were often none before will improve the quality of such debate and may also point out when trouble is occurring and encourage the search for solutions.

I would like to emphasize that in introducing some quantification in areas where presently almost no output data is generally available, we are taking the risk of using imperfect data in order to make a first start.

We limited ourselves to data from the last 3 or 4 years; to serial data that covered at least 2 different years, so that we could present rates of change for each functional area. We attempted to obtain output statistics for a wide range of quality areas, the results in each functional area, rather than how much effort were put into improving it. The report presents indicators for 14 different quality areas.

We aimed this paper at labor officials, business executives, journalists, and governmental officials, limiting ourselves to being descriptive--what is the condition of our cities and at what rate are they changing?

We presented our indicators in comparative fashion in order to make our data more meaningful to the general user. One approach was to convert most of our figures to a per capital basis. Another was to make three different comparisons for each functional area: (1) were conditions getting better or worse; (2) where does this metropolitan area rank compared to the other 18 areas; and (3) is this metropolitan area changing at a faster or slower rate than the average of the 18 areas?

Comparing deteriorating areas with other deteriorating areas is open to criticism. Our reply is that we do not have normative standards. We know what rate of infant mortality to aim for, how much crime is tolerable, how much air pollution we can afford before injuring our health. Until definitive norms are agreed upon, we will continue our comparative type analysis.

The main purpose of this first report is to demonstrate an approach not present data--the obtaining of the best available indicators in a wide variety of fields and presenting it in a convenient and understandable form.

Our report is iterative. We expect to keep reissuing urban indicator studies with both improved indicators and data.

Our study deals with 18 Metropolitan Areas. More data was available for the largest areas. This comparatively small number of areas contains over half of our metropolitan population, and many of our most severe urban problems. If our methodology is useful for this prototype study in these metropolitan areas it may be advisable to expand it to cover many more.

We did not pick the indicators for these 14 quarterly areas arbitrarily, but consulted with several experts in each field and tried to obtain the most authoritative data available. We intend to continue our contacts with experts in each field so we can incorporate better measures and data in our reports and different means of presentation. For example, we have just completed the rough draft of a paper presenting central city and suburban data for six of our quality categories.

Now let me describe our indicators briefly:

(1) For Income Level we used per capita income corrected for areas cost of living.

(2) For Unemployment we used BLS data from the Current Population Survey.

(3) As an indicator of Racial Equality we used the ratio of Black unemployment to white unemployment.

(4) As a measure of Poverty we used the percentage of households with annual incomes under $3000.

(5) For Public Order, we used the robbery rate.

(6) For Education we used the Selective Service Mental Test Rejection Rate. We spoke to many experts and spent a lot of time looking for a more satisfactory measure than this, but we were unable to get comparable dropout rates or achievement test scores, for example. However, we have continued our work in this area and have recently completed the rough draft of a study presenting 13 different educational measures for 10 large cities.

(7) For Housing, strangely enough we could find no recent comparable data on the physical characteristics of housing in these metropolitan areas. After consultation with several housing experts we used the comparative cost of housing obtained from the BLS moderate income family budgets. Incidentally, Houston has the lowest housing cost of any of the 18 metropolitan areas.

(8) As an indicator of Health, we used the Infant Mortality rate.

(9) For Traffic Safety we used the auto accident death rate. Here we could find no suitable comparable data for a transportation indicator, and so we measured traffic safety only. We are still consulting with government and private transportation experts, and may be able to come up with a transportation indicator later this year.

(10) As a measure of Air Pollution, we used a composite rank sum index issued by HEW.

(11) For Citizen Participation we used the percentage of eligible voters voting in the last two presidential elections.

(12) As an indicator of Community Concern, the best data we could find was per capita contributions to the United Fund.

(13) For Mental Health, we used the suicide rate, and finally

(14) For Social Disintegration we were able to get per capita figures on the heroin addiction rate. Houston is one of the lowest in this functional area.

We presented most recent ranking data in a geographical format listing all 18 areas. On the same page we graphically illustrated the comparative recent rates of change for 18 metropolitan areas. In addition to a chart, we presented a table, giving the data for the two years we used, the rates of change for each metropolitan area, and the comparative rankings. Finally, we gave our data sources, our methods of calculation, and both conceptual caveats and data limitations. We would appreciate any suggestions you might have for improvements.

CONCLUSION

This first study demonstrates (1) the diversity of the data available on our metropolitan areas, and the need for new and better output-oriented

The Bureau of Labor Statistics has, under the law, an obligation to study the levels of living. I hope that it will expand its present work and will concern itself with those non-purchased, non-consumer, non-priced indices of social well-being. We are now participating in the work of the Bureau of the Budget to produce a statistical report on social indicators. We have a small committee, of which I am the chairman, trying to develop social indicators in the employment-related fields.

There are many statistical series relevant but not directly related to social indicators and none directly collected for this purpose. We are not interested in social output measures. Many of our series are input measures; they tell us how much we allocate to a subject, but not what the end result of this investment is, such as education, where it is exceedingly difficult to get any kind of output or productivity measure.

Some people interested in the subject of social indicators have tried to develop and to relate goals and social statistical series. Others have been more program, planning, and budget oriented, more interested in providing certain social output more efficiently, and if necessary, trying to meet only those goals which can be meet efficiently. There are others, and I think on the whole I am one of them, who are more interested in discovering what people's social goals are and endeavoring to meet them.

The Urban Institute has used as a proxy for the multiplicity of indices that could be developed one index for each of the major problem areas. This is not a permanent commitment on their part, but a beginning. I expect that over the next few decades we will develop indices which will incorporate many of the 60 possible indicators in the field of health. I would like to praise very highly their general approach. Nevertheless, this still permits one data in

many functional areas; (2) shows the diverse characteristics of our large metropolitan areas. For instance, for Washington, D.C., we took 42 comparative measurements. Out of those 42, 16 were positive in nature, 19 were negative, and 7 were neutral.

In conclusion, this paper is descriptive in nature; it covers many quality areas; it is aimed at a general audience and includes caveats concerning the data used. Basically, it is a strategy for research, rather than a final product. Finally, it is iterative. We are actively seeking criticism and comments. We need the help of professionals such as you in order to develop improved methods of measuring the "quality of life" of our cities.

RECENT WORK ON SOCIAL INDICATORS

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I hope that this subject is going to be the next major area of Federal as well as State and local government statistical effort. To those States who are just beginning on their economic indicator work I should like to recommend they might try to be in the vanguard of the social indicator field. Social indicators are probably much better suited even than economic indicators to disaggregation by local area and by State. The SMSA's themselves, after all, have a tremendous degree of diversity in them and the problems of the inner city are totally different from those of the doughnut that surrounds it.

One of the principal reasons we want social indicators is that in this, the richest country in the world, many people do not feel well off. There is a general awareness of social malaise. If we develop social indicators, it will not be an entirely new field of endeavor, but a return to an old one. The present interest is a continuation of the rather conceptually-oriented efforts begun by the Department of Health, Education and Welfare in Toward a Social Report.[1/] Before that, Bertram Gross had developed similar, relevant statistical data. However, the subject of a social report itself was one of the many recommendations of the Automation Commission. Before that, there was the Eisenhower Commission on National Goals, and earlier, the very distinguished report of the Hoover Commission on Social Trends.

The last 60 years of our economic history have been a rather maverick period. In the last century, we were much more concerned with social questions than we have been until recently. Many enlightened businessmen spent a great deal of money financing excellent work on the subject of levels of poverty and how many people were below it. We have been so preoccupied with the business cycle and the disaster of heavy unemployment that we have gotten away from what Adam Smith regarded as the major question of economics, the problems of the wealth of nations. As the wealth of nations increases, so our attention turns from purely economic measures of well-being. Now it is the turn of the social measures.to fault them on their particular indices. Unfortunately, each of the area measures picks up all the problems of its particular index.

The Urban Institute's cost of housing indicators is itself an input indicator which is inappropriate but presently probably inevitable. The racial equality index on the position of minority groups makes Washington, D.C. look rather bad because recently the ratio of the Negro unemployment rate to the white unemployment rate has gone up rapidly. The use of this measure is unfortunate because, when Washington is compared with other cities of the United States, I would say that the position of the Negro on the whole is better there than in many other cities.

1/ Toward a Social Report (U.S. Department of Health, Education, and Welfare, 1969).

His income is among the highest in the country, and the high level of occupations is noticeably different from that of most other cities. And so, instead of unemployment, I would prefer to see a measure developed which enables us to make a comparison of the occupational structure. And I would also like to see the ratio of Negro-to-White incomes.

I question the United Givers Fund as a measure of community concern. Robbery as an indicator of crime, or rather, public order, is really rather like presenting the tip of the iceberg. It is crimes of violence that we fear more than robberies themselves.

I would like in future to see some work along the lines of disaggregation and I believe the Urban Institute is doing something of this kind. Some problem areas, such as environmental quality have very wide and also very narrow aspects to them; may require international agreements for their solution; or may be of great social significance in one area, but do not have much importance beyond those boundaries. The loss of the use of a body of water for recreational purposes would be one example. For the problems special to a particular area, disaggregated social indicators for a State or a city are highly appropriate to the deep concerns of the citizens.

I have two other criticisms. No methodological rationale was presented to explain the inclusion of some quality area indicators, nor the exclusion of others. Implicit in their list of indicators is a theory which provides the basis for each selection. One of their bases is clearly, and properly, the desire for output rather than input data. But output data on what? Is it output which measures the severity or otherwise of each problem area, or the degree to which we are realizing some unstated social goals, or the subject areas and the measure in those subjects of how much people like or would like to live in any particular city.

It has been emphasized that this study was addressed to a non-technical audience (nontechnical but with methodological interests?).

The work that the Urban Institute has done does not provide us with a measure of where one would like to live. In evaluating a city, I felt that a number of areas were ignored which might have been considered, such as the cultural life of the city, the climate, the leisure time amenities, and what the French call "ambiance," that feeling when you look at how a city is built and organized that things are well there.

Some of the cities selected worry me a little. I wonder whether I can believe the high ranking of some cities in the housing measure, and I wonder whether housing of Negroes and of Mexican-Americans has really been adequately covered in the indicators that they have selected. This is not a jibe at the authors of the paper, but at us, the producers of these statistics.

I regard this study as having made a good beginning to a difficult overall task, and one which I hope will be expanded very much in the future.

NEGROES IN THE BUILDING TRADES

David Pinsky, Professor
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One of the more troublesome manpower problems in Connecticut, as in many other states, during the past several years has been the lack of minority group workers, mainly blacks, in construction.

The Connecticut Commission on Human Rights and Opportunities early in 1969 requested that the University conduct a study of minority group workers in construction in order that they might have facts on which to enforce various state laws prohibiting discrimination in employment.

In undertaking the study we attempted to determine the number of proportion of minority group workers by occupation and the reasons for abnormal proportions.

The number of minority group workers was determined by an actual head count at construction sites. Early in the field survey it became apparent that a count of Spanish Americans would be difficult because of their generally lighter color. Therefore rather than obtain a questionable figure, it was decided to drop Spanish Americans and confine the study to Blacks.

The field study was conducted by six graduate students during the summer of 1969. This revealed that 6.9% of the workers were black which was an advance from the 4.8% proportion as shown in the 1960 census. The gains in the number of black workers was mainly in the labor group, in which more than half of all black workers were employed in the summer of 1969. Substantial but smaller gains were made in the other so-called "dirty" occupations - brick, stone, and cement masons, and among the skilled trades, a substantial increase was made in carpenters.

In the occupations requiring the most training and skills, and also the highest paying - electrician, plumber, steamfitter, sheet metal - the number and the proportion of blacks are low and have shown no significant gains in the past ten years. The proportion of blacks is also low in the ironworker occupation.

Little change can be expected in the proportion of blacks in these skilled trades for at least the next five years. The licensing provisions for electrician, plumber, and steamfitter require a five-year apprenticeship. In sheet metal, nearly all new journeymen must also serve a four-year apprenticeship. The current proportion of blacks in apprenticehip in these occupations is also quite low. Therefore, at least for the next five years no significant increases in the proportion of blacks in these occupations may be expected under the present systems.

The low number of blacks may be accounted for basically by two factors. First, construction apprenticeship and trades are largely family oriented. Youths develop an interest in and knowledge of a trade through family and friends. With few blacks now in these trades, there are few who can pass the interest in and knowledge of the trades on to black youths, or assist them in entering once the desire and interest has been stimulated.

Secondly, these trades require considerable technical and academic knowledge. Technical manuals of standard procedures have been developed for these skilled trades and must be studied for the apprenticeship and licensing procedures. This requires a moderate amount of competency in mathematics and science. Because of their cultural and educational background, many of the blacks are unable to cope with this phase of the entry into skilled trades.

The study was unable to find any overt cases of discrimination against blacks in the entry process. A number of community action agencies, human rights commissions, and one urban league were visited and asked if they knew of or could identify individual cases of discrimination. No positive responses were received. The Commission on Human Rights and Opportunities did submit a list of sixteen persons who had filed complaints on discrimination in construction during the past five years, seven against employers and nine against labor unions. Of these, seven were satisfactorily adjusted without any hearings, eight were dismissed as without foundation or for lack of evidence, and one is still pending.

While wages in construction are high, the trades are not attractive to or held in high esteem by youth. This is because of their image of the typical construction worker and of the hard physical nature and conditions of work in construction. Only a very small proportion of noncollege bound high school seniors are planning to enter construction, and those that are show interest mainly because of family ties. College bound high shcool youths showed practically no interest. College students disdain the construction trades even though recognizing that the wages they could earn may be considerably higher than what they will earn upon completion of college.

The total number of on-site construction jobs in Connecticut will most likely be at about the same level in 1980 as it is now. The total amount of building and road construction activity will be at least 50% above present levels but the increase will be accomplished through new techniques, materials, and machinery, rather than through more workers.

While the total number of workers will remain about the same, there will be a shift in the occupational composition. A higher proportion of skilled workers will be required and a lower proportion of laborers, masons, and carpenters. These last three occupations are those in which the proportions of blacks are high or increasing.

A shortage of skilled workers will persist throughout the decade. The number of apprenticeship openings are largely controlled by union members for their respective crafts. Since there are no seniority provisions in construction, the members protect their job security by limiting the number of workers in their craft through apprenticeship openings.

The level of construction activity will not increase evenly throughout the next decade but will fluctuate with general business conditions and other factors. Thus the intensity of the shortage of workers will vary over the period.

AREA LABOR FORCE STATISTICS

Unemployment Estimates: Household and UI Based

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The State Employment Security (ES) agencies have been preparing unemployment estimates since at least 1960 for States, major labor areas, and small rural areas. The ES estimates are prepared according to a procedure developed by the Department of Labor and published in the Handbook on Estimating Unemployment in 1960. (This procedure will hereafter be referred to as the Manpower Administration (MA) method.) Starting with 1967, the Bureau of Labor Statistics (BLS) has published annual average unemployment estimates and related labor force data for the 20 largest areas and the ten largest States. For several areas there are significant differences between the Current Population Survey (CPS) unemployment estimates and those derived using the MA method. There has been considerable concern within both the State agencies and the Department of Labor in Washington about the differences between the two sets of figures. This paper reviews the current work under way within the Department of Labor or its sponsorship which relates to the problem of reconciling these differences. (Some of these activities were begun as part of the ES research program concerned with improving the area unemployment estimating procedure.)

Manpower Administration Method

Before turning to specific discussion of the work that is being done a brief description as background material needs to be given of the MA method. (A detailed description of the methodology is contained in the Handbook on Estimating Unemployment.) In an abbreviated and general fashion this method may be described as a "building block" method in which there are three major "building blocks," (1) unemployment related to covered employment, (2) unemployment related to noncovered employment, and (3) unemployed entrants. These blocks are described in turn below.

1. Unemployment related to covered employment:

This block includes the unemployed currently covered by the unemployment insurance program and three other unemployed groups related to the UI program. The major component of this segment is the insured unemployed. This component consists of persons who have filed claims for unemployment insurance certifying to a week of unemployment. The insured unemployment figure is obtained from a count of the claims filed for unemployment insurance. The three groups not counted in the insured unemployment count are: (a) Delayed and never filers for unemployment insurance; (b) Nonmonetary disqualified;[1/] and (c) persons who have exhausted their benefit rights (exhaustees).

[1/] This item only covers such disqualified in States where they are not required to file claims certifying to unemployment during the period of disqualification.

The Delayed and never filers are persons that have been laid off from covered employment who are looking for work and are eligible for unemployment insurance, but for reasons not related to the regulations of the UI program do not file UI claims within seven days after they lost their jobs. Studies have shown that there is a significant number of such persons. Estimates are made for the number of such unemployed based upon the studies that have been made by the State Employment Security Agencies.

The Disqualified unemployed are persons eligible for unemployment insurance on the basis of their employment and earnings experience and who are seeking work but who have been disqualified from receiving the benefits for a specified or indefinite period because of infraction of certain rules or regulations of the unemployment insurance program. As in the case of the delayed or never filers, studies by the State Employment Security Agency are the basis for estimates of the number of unemployed in this group.

Exhaustees are persons who have used up the unemployment insurance benefits for which they were eligible. The unemployment insurance benefits are only paid for a specific period--from 26 to 30 or more weeks, depending upon the State law. Once a person has used up or exhausted his benefit rights, he drops out of the insured unemployment count. Therefore, if such persons continue to be unemployed, separate estimates of their number have to be made. The methodology and relationship needed for this estimate are based upon studies conducted by the State Employment Security Agencies.

2. Unemployment related to noncovered employment:

The noncovered unemployment segment consists of workers from industries and activities not covered by the unemployment insurance program, such as domestics, State and local government, nonprofit institutions, self-employed and unpaid family workers in agricultural and nonagricultural activities, and hired agricultural workers. Also included are unemployed from so-called "small firms." These are establishments in covered industries employing fewer than four (or less workers depending on the State law). Such establishments are excluded from coverage of the UI program.2/

The estimates for each of the industries or activities in this sector are developed using unpublished data on unemployment rates by industry available from (a) national CPS and (b) current employment estimates for each of these groups obtained according to the procedures developed by the MA.

From unpublished CPS data it is possible to develop relationship between the unemployment rates of workers from the covered industries with those of workers from the noncovered groups in this segment. These relationships are then used as weights that are applied to insured unemployment rates of each area to obtain the unemployment rates for each noncovered group. These unemployment rates are then appropriately applied to the group's employment estimates to obtain the number of unemployed from each.

2/ The Federal law requires coverage of firms of four workers or more but the States may elect to cover firms with fewer workers. In a number of States the coverage is for one or more workers.

3. Unemployed Entrants:

This block of unemployed may be divided into two groups: new workers who have come into the labor force for the first time and are seeking work and reentrants into the labor force who are seeking work. The reentrant unemployed are persons who had been at some previous time period in the labor force, but left it and now have returned to the work force to look for work. The CPS has always provided data on the number of unemployed new entrants and in 1967 began publication of data for reentrants. Statistical analyses of these data showed that there were reasonably constant relationships between the number of entrant unemployed and (a) the labor force excluding unemployed entrants, (b) the unemployed excluding unemployed entrants, and (c) the relative size of the youth population. Applying these relationships to corresponding data derived as a part of the area estimating procedure (except the youth population factor) gives an estimate of entrant unemployment for the area. The relative size of the youth population or youth population ratio (YPR) is computed separately on an area basis.

Review of Current Activities

Interbureau Committee: An interbureau committee has been established by the Labor Department consisting of representatives of the Bureau of Labor Statistics and the Manpower Administration. This committee has the general responsibility for studying and coordinating work concerned with the reconciliation of the two sets of figures. Since the committee has just recently been established it is too soon for it to have a report regarding its activities.

Interim Revision of MA Procedure: The U.S. Training and Employment Service (USTES) is working on development of interim revisions that could be made to improve the estimating procedures. These revisions are considered interim in that they may be made available prior to completion of a broader study discussed below. The revisions are taking into account the additional information that has become available from the CPS on reentrant unemployment. The present MA methodology was evaluated and tested primarily by using total unemployment control totals available for the CPS. With the availability of data on the unemployed reentrants an additional control total is available which relates to the number of unemployed excluding unemployed entrants. This makes possible more detailed evaluation of the blocks of the estimates used to build up the unemployment excluding entrants estimate. Also, since previously information was only available on unemployed new entrants, it was not possible to directly test procedures for estimating new and reentrant unemployed, but now such tests are possible.

The State agencies are also assisting in this work. For example, about two weeks ago a work committee meeting was held by the USTES in Washington of State agency research staffs. At this meeting the work being done by the Washington office was reviewed and arrangement made for a number of States to test some of the interim revisions that were under consideration.

University of Houston Studies:[3] The projects at the University of Houston are being conducted under contract with the Department of Labor and the Virginia Employment Commission. These studies are concerned with improving the

3/ The author is principal investigator of these studies. He is also being assisted by Dr. James Willis, Associate Professor of Quantitative Methods at Louisiana State University.

procedure for estimating unemployment for both large and small rural areas and with the problem of reconciling the MA and BLS estimates. The large area study is related to the interim revision activities of the USTES but is broader in scope. This study is not only using the additional national information available from the CPS but also available data for the 20 major areas and ten States and special CPS tabulations for some 100 areas purchased by the USTES. It has a number of facets. These include determination of the extent and nature of limitations, if any, of the MA procedure because certain blocks are based on national relationships and therefore are not sufficiently sensitive to area difference. Also, the study is reviewing in detail, particularly for the 20 major areas, the estimating procedures of each of the "building blocks" to determine where improvements could be made. This part of the work is also important to the problem of reconciling the CPS and MA estimates with respect to finding possible explanations for differences between these sets of estimates that stem from the MA estimating procedure.

In the work of reconciling the CPS and MA estimates it probably will be necessary to examine the CPS sample and methodology, either because no reasonable explanation for the differences can be on the basis of analysis of MA estimates or to verify a conclusion reached in that analysis. It is presumed that the CPS review will be a matter considered by the Labor Department interbureau committee.

The study on improving small rural area unemployment estimates is being undertaken under a contract with the Virginia Employment Commission but sponsored by the MA. This study is concentrated on analyses of 15 rural areas for which the State Employment Security agencies conducted household surveys during a single month. The project is undertaking the following:

(1) Comparison of the results of the household surveys with the estimates derived from the USTES methodology for each of the survey counties.

(2) Comparison of the household survey and USTES results with other possible methods for estimating unemployment levels or rates by area.

(3) Development of suggested interim revisions in the small area unemployment methodology based upon the analyses resulting from items (1) and (2).

LABOR MARKET DYNAMICS AND THE INFLATION PROCESS

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I'd like to lead off by discussing a little economic history and history of economics. Next I consider the labor market interpretation of the inflation process, and then take a quick look at some of the implications for manpower policy, and wind up by mentioning a few things we're doing at the Urban Institute in the way of research.

Economics: Classical, Labor, and Keynsian

This is a lot of territory to try to cover so I'm going to paint with a very wide brush and try to give you a broad overall picture of these points, rather than taking a narrow topic and going into it in depth.

Going back to the 1920's in this country, established economic theory ran along the following lines. The real economic output was determined by population and productivity. The quantity of money in the system determined the nominal variables in money terms. There are really two quite separate analyses for handling these. In these markets knowledge was assumed to be perfect and products were standard. The markets, if you waited a little while, would reach equilibrium. Unemployment was really no problem -- all you had to do was to wait for the temporary deviations from full employment to die out.

At this point the labor economists got off the boat. They said this theory doesn't at all describe what goes on in the labor market and they proceeded to undertake a line of development with a great deal of emphasis on institutions.

When the depression occurred in the 1930's, the classical theory fell of its own weight. People got tired of waiting for prosperity to come around the corner and Keynes' analysis indicated that the feedback flow of money had a great deal to do with the determination of the real output of the economy. In 1939 military spending ended the depression, and gave a clear validation of the Keynes' analysis. Later with the Kennedy tax cut we had a second validation of the Keynsian theory. This time the public became fully aware of the fact that the federal government had a great deal of power in controlling the economy and, of course, the corresponding responsibilities that go with that power.

Unfortunately, the Keynesian theoretical work in the area of wages and prices didn't go very far. Keynes assumed that when there was inadequate aggregate demand, there would be unemployment, and prices and wages would be virtually constant. He assumed that if you had excessive aggregate demand that you would get increases in both wages and prices: they would go up together and there would be no real effects. But his analysis didn't really contribute very much to explaining the actual determination of wages and prices.

During the Administrations of Kennedy, Johnson, and Nixon, unemployment was reduced from roughly 7 percent down to 3.3 percent. Americans felt pretty good about this. But, many European countries had had unemployment rates below 2 percent for 20 years, so that by comparison the American performance didn't look particularly good. Unfortunately when we got down to this relatively low unemployment rate which was low by American standards we began to have a very high rate of inflation.

Phillips' Inflation-Unemployment Tradeoff

Some light is thrown on this experience by a paper that A.W. Phillips published in 1958. With historical data from Britain he explored a relationship between the level of unemployment and the rate of change of money wages. To the extent that this had a theoretical basis, it was interpreted as the wage-price adjustment mechanism to excess or deficient demand. If you had excess demand, prices and wages would rise. If you had insufficient demand, prices and wages would fall. But that was the extent of the theory.

Now, if indeed there is a stable relationship between the inflation rate and the level of unemployment, then we might have a national policy dilemma: every point on this curve might be quite undesirable. By the use of monetary and fiscal policy we could get to any point on this curve that we wanted to, but some places on the curve would have too much inflation, other points would have too much unemployment, and points in the middle would have too much of both. So the question arises as to whether we may be inherently limited in what we can do with monetary and fiscal policy in controlling inflation and unemployment.

A Labor Market Interpretation of the Tradeoff

Now I would like to give you an interpretation of what this relationship is. Because it's going to be very brief, I'll slough over all sorts of important details. The original rationale of the Phillips curve is inadequate because it suggests that you would have either excess supply or excess demand. If you interpret unemployment as the measure of excess supply in the labor market, then we know historically that we always have had excess supply. But this doesn't square with the fact that money wages have often risen at a time when unemployment had existed, which suggests excess demand. Also we always have unfilled vacancies, even when we have unemployment. That doesn't square very well with the theory that calls for excess supply or excess demand, but not both. This suggests that you have to go back and reconstruct the theory in order to make it fit the observations better.

There is a relationship between the stock of vacancies and the stock of unemployment. The higher the level of vacancies, the lower the level of unemployment, and vice versa. If we decrease aggregate demand, we will decrease vacancies and that leads to an increase in unemployment. That vacancies and unemployment move in the opposite directions can be seen in both time series data and in cross-section data across cities and states.

Now, let's look at the implication of this relationship between vacancies and unemployment for recent American history when we decreased unemployment from 7 percent to 3.3 percent. When that reduction in unemployment by a factor of over two occurred, there was a corresponding doubling in vacancies. The pressure on money wages is determined both by the stock of vacancies and the stock of unemployment. When we went from 7 percent to 3.3 percent unemployment rate, we approximately halved the unemployment rate and doubled the vacancy rate, so the vacancy-unemployment ratio went up by a factor of 4. If you take this ratio as a measure of pressure on money wages, when it changed

by a factor of 4, it is not at all surprising that wages and ultimately prices responded to this great increase in demand pressure so we experienced inflation.

Wages respond to the pressure of high vacancies in several ways. Some workers quit jobs because there are so many promising vacancies that they can search and get a better job at a higher wage rate. Others search on the job until they find a better paying one, then they quit on Friday and start a new job on Monday without being unemployed at all. The third mechanism of wage increase comes into play when employers have high quits and difficulties in recruiting. Then they tend to grant wage increases voluntarily in order to hold their work forces.

When you have a high ratio of vacancies to unemployment, with these three mechanisms operating, there tends to be a steady upward movement of wages. These wage increases are passed along in markups on the labor costs with the result that prices are increased correspondingly.

For a constant rate of unemployment there is a corresponding constant rate of vacancies. And the ratio between these two rates produces an upward or downward pressure in the market which causes a steady drift of money wages and prices. Hence there is a long-run inflation rate associated with each unemployment rate. This is a very crude interpretation of the Phillips relation between unemployment and inflation.

The labor market is, of course, much more complicated than this simple outline suggests. For example, there are unions and when the labor market gets tight, increases in union wages tend to fall behind general competitive wage increases. Consequently it's hard to attribute the primary inflationary push to unions. There are other factors that affect the labor market, such as guideposts, expectations etc.

Implications In Manpower Policy

What are the policy implications of stressing the role of the labor market in the inflation process? Obviously we want to decrease unemployment, but if we decrease unemployment through aggregate demand we get a corresponding increase in vacancies and inflation results. So we're looking for ways to decrease unemployment that don't increase inflation. This can be done by reducing both unemployment and vacancies together. If we have fewer people looking for jobs and fewer jobs to be looked for, there would not be high inflationary pressure. This can be done by increasing the efficiency of the labor market.

There are two ways to influence the stock of unemployment. First, if we can find jobs for workers in three weeks on the average instead of a month, i.e., just get workers in exactly the same jobs but do it faster, we can decrease unemployment. By decreasing the time it takes for a man to find a job, you're also decreasing the time for the job to find the man so the stock of vacancies will decrease also.

The second thing you can do is to increase the quality of the job-worker match so it will last longer. This is equivalent to cutting down the turnover rate so that when you put a man on the job, both he and his employer are so happy with the employment "marriage," that it lasts a long time. Now, on the average, employment tenures of all the people that are hired last only 25 months. This astoundingly short period is a gross average between the people that quit in two days and the people that work 20 years. Increasing job tenure

will, of course, reduce the flows through the labor market and thereby reduce both unemployment and vacancies.

This way of looking at the inflation process points up the tremendous challenge for everybody in the labor field to help find ways in which we can make the labor market more effective: faster placements and longer tenure. This could be done by increasing geographic mobility, increasing mobility between occupations by re-training, speeding up the operation of the Employment Service, restructuring jobs to fit people, and high quality matching of individuals to particular training programs and jobs. If, in response to a shift in the demand mix, we had a quicker way of getting individual workers to the new jobs, geographically and occupationally, we could improve the efficiency of the labor market.

Some Urban Institute Research

A whole set of related research questions are being studied at the Urban Institute with the support of the Manpower Administration, the National Science Foundation, and Ford Foundation. We're concerned with the determinants of the duration of unemployment, the duration of vacancies, and why it is that the unemployment differentials between different demographic groups tend to have stable relations such as the two to one ratio of black to white unemployment. Why does this ratio tend to remain constant in spite of cyclical fluctuations in the economy and why is it two instead of one?

We're studying determinants of turnover in terms of quits and layoffs, the composition and duration of unemployment, and how the imbalance of unemployment by region and occupation contribute to unemployment and inflation. We're trying to get a better fix on the determinants of the vacancy-employment relationship and the wage response relationship. We view the process of changes in wages and prices as a system analysis problem. When we understand some of the component relationships better, we hope to fit them together in a model of the labor market and then do a feasibility study on the possibilities of incorporating it into a model of the whole economy, so that the whole process of wage-price change could be explored.

Finally we hope to use this better quantitative understanding of how the labor market operates to determine the implications for manpower policy.

There are additional parallel projects going on at the Urban Institute that I'll just mention. Many problems have a fine grain character when you look at the metropolitan labor market involving the inner city, suburbs etc. Harvey Garn has a project in this area. There are important unanswered questions about the influence of government programs on income distribution, not only from earned income which our model contributes to, but also property income etc. Guy Orcutt and Nelsen McClung have projects in this area. There are projects on transportation and other areas that also bear on employment.

A little flyer is available that describes some of the Urban Institute research papers. You're welcome to pick up a copy, and if you are particularly interested in keeping up with our research as it gradually evolves, drop me a note and I'll be glad to put your name on our mailing list. 1/

1/ Some publications that have appeared subsequent to this talk are:

C. Holt, C.D. MacRae, S.O. Schweitzer, and R. Smith, The Unemployment-Inflation Dilemma, (Washington, The Urban Institute: 1971).

C. Holt, C.D. MacRae, S.O. Schweitzer, and R. Smith, "Manpower Programs to Reduce Inflation and Unemployment: Manpower Lyrics for Marco Music" (Washington, Urban Institute, 1971).

We hope that this research, much of which rests on BLS, USES and other DOL data, will be of help in understanding and addressing the public policy problems of inflation, unemployment, poverty etc. Thank you.

WAGES AND PRODUCTIVITY: RECENT DEVELOPMENTS

Trends in Productivity Costs, U. S.

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I'm going to discuss with you today, trends in productivity and unit labor costs over the past year and a half and how these measures relate to past experience. Certainly in the current discussion of the economy's inflation problems, understanding of what has been happening to productivity growth and labor cost is of considerable importance.

As you may know, the recent productivity experience in the United States has been rather poor. In 1969, the increase in output per manhour was, with the exception of 1956, the smallest in the postwar era -- less than 1 percent per year for the private economy, and less than a half percent for the nonfarm sector.

Moreover, the last five quarters have been the longest sustained period of poor productivity growth in the postwar era. For the nonfarm sector, the level of productivity has declined in four out of the last five quarters. What happened in 1969 to explain the poor productivity record? I think it was primarily the result of greater than usual uncertainties on the part of business experiencing some declines in output growth as to the future course of business activity. Many factors contributed to this uncertainty such as the war in Viet Nam and the fears of further inflation.

In general, short term productivity movements are senstive to output changes and lags in the adjustment levels of employment to output. Such was the case during 1969. Despite the very modest output gains, producers continued hiring at rates as high or higher than the previous year. Nonfarm employment in 1969 rose by 2.8 percent compared with the 2.3 percent gain in 1968. Although there was a slowdown in production, employers were hesitant to change their hiring practices because they felt that the slowdown might be shortlived.

Moreover, while output advanced slowly for the nonfarm sector as a whole, the demand for investment goods remained high during most of 1969, since investment, in real terms, increased by nearly six percent in 1969.

This sustained demand for investment goods contributed to high employment levels in 1969. High output levels necessitated employment increases in the industries producing these goods. In addition, many businessmen who would have to compete with durable goods producers in the labor market undoubtedly kept their staffs to an even greater extent than their expectations would indicate.

The product market, therefore, was growing at uneven rates so that additional labor was needed only in certain sectors. For the past several years, however, the labor market was very tight with shortages in particular

occupations. Many occupations can be used in several industries, and workers would probably have little difficulty in finding other jobs if they should lose theirs. Therefore, producers, remembering difficulties that they had in filling their openings over the last few years, were reluctant to reduce their workforce by laying off employees who could easily find jobs in other firms.

How has this downturn in productivity growth compared with other ones which have occurred during the past two decades? As I mentioned earlier, in terms of duration, this is the longest that we've had. In no corresponding period have we experienced such a sustained decline in productivity levels. In terms of magnitude, however, there have been periods when productivity declined much more. These declines have often occurred at the beginning of an economic downturn or recession. The fall off in output that occurs at the start of a downturn results in less optium utilization of plant and equipment, and the decline in the efficient use of resources adversely affects productivity movements.

In addition, employment adjustments are not immediately made to compensate for falling demand. Although business is poor, a producer cannot cutback staff as much as current output levels indicate. Many of his employees have duties which are not directly related to the volume of production. As the proportion of these nonproduction workers or overhead labor becomes relatively more important, as has been over the last 2 decades, the tendency to retain staff is accentuated. In addition, employers have contractual arrangements which tend to slow down cutting of staff. These include long term employment contracts as well as rights to severance pay, and supplementary employment benefits and the number of these has been increasing over the years.

Furthermore, a firm that has a large investment in trained labor and it may be difficult to rehire these workers should business improve. Consequently, it is preferable to stockpile skilled workers and not use them fully rather than risk the necessity of hiring untrained workers later on. The lag in the adjustment of employment to declines in output has occurred in all of the economic downturns in the postwar period.

But there have been other periods of deceleration in productivity such as 1952, 1956, during which the output growth slackened, but it fell off after an extended period of high and sustained production. The economy at the beginning of these years was operating at higher than optimum activity levels and bottlenecks because of material and labor shortages were occurring. To meet the production needs, marginal workers were hired and overtime became an established practice. The fall off in output growth in these years was not the beginning of a recession period, but rather a return to what would seem more normal operating conditions. And under these circumstances, we would have expected some pickup in productivity with the drop off in output growth.

Yet the productivity experience in these years was the worst in postwar periods, especially in 1956. These were the fall offs periods after an extended boom period. It appears that during these periods producers' expectations of future demand were unclear and in this uncertainty employers continued their previous employment practices.

It would seem that 1969, then, was quite similar to 1952 and 1956 in that it was a year of some fall off in demand following a period of high level in production in 1968. The 1969 experience does not seem to compare to the experiences of recession years such as 1958 and 1961 where there were sharp cutbacks in both output and employment.

With regard to unit labor costs, in 1969 a similarly poor experience occurred. Last year they rose sharply -- 6.3 percent for the nonfarm sector. This increase was over 2 percentage points higher than the 4 percent rise which we had in 1968, and in fact, the highest since 1956. Although unit labor costs reflect the movements of both hourly compensation and output per man-hour, in general, productivity movements have been a major influence. This is true because productivity is sensitive to changes in demand while hourly compensation tends to grow more steadily over time. The 1969 experience was no exception. The sharp rise in unit labor costs was indicative of the productivity fall off last year since the increase in hourly compensation in both 1969 and 1968 was about 7 percent.

While the increases in compensation per man-hour have not been as volatile as changes in productivity, there has been some acceleration in hourly compensation increases since 1966. At the same time, productivity growth on the average has not been as high as the earlier part of the 1960's. This growth has resulted in a rapid rise in unit labor costs since 1966 - averaging about 4-1/2 percent a year in contrast to the almost stable rate which we had in the early 1960's of about a half a percent per year change.

Unit labor costs comprised a major part of production costs and large increments in these can effect and do affect prices. Last year, the GNP deflator for the nonfarm economy rose by the largest rate since the Korean War and mainly reflected unit labor cost behavior.

Increases in labor costs, of course, are not the only reason for price increases. Changes in other costs of production such as depreciation, interest and profits can also contribute to price advances. Last year, however, unit nonlabor payments only increased modestly and unit profits a critical element of nonlabor payments, actually declined indicating that to some extent there was a profit squeeze in 1969. Another reason for the rapid rise in prices can be excessive demand. This certainly was not true in 1969 when output growth was slackened.

Hourly compensation is not just a cost element; it is also income to the worker. Often wage demands reflect not only payment for doing a job better but also the desire for maintaining current levels of purchasing power which are hurt by rising prices. Real compensation per man-hour --- hourly compensation adjusted for price increases -- are the elements which are indicative of improvements in purchasing power and the maintenance of stable share of output for the workers. To the extent that real compensation per man-hour increases are the same as the productivity increases, this share will remain stable.

In general, the shares of factors of production have been relatively stable over the postwar period, with only small shifts occurring in periods of cyclical change. For the most part, movements in the nonlabor share of total output reflect changes in unit profits. In the short-run, these can be taken only after other nonlabor payments, which are relatively fixed, are paid so that year-to-year changes in profits reflect adjustments being made due to the current economic situation. Therefore, changes in labor share tend to move inversely with changes in unit profits. We also may see deviations in the unit profit-labor share relationship at times when labor reacts to intensify their wage demands because rising profits rates and prices shift income away from labor.

In 1969, real compensation per man-hour rose by a relatively small amount -- about 2 percent in the private economy compared to over 3 percent

in the previous year. This indicates that labor made very little advance in living standards last year despite the fact that wages and salaries were increasing at a very high rate. But the 1969 advance exceeded the productivity gains and thus increased labor's share of output.

In closing let me say a few words on where we stand today. As I mentioned earlier, the decline in the level of nonfarm productivity continued into 1970. In contrast to most of 1969 when declines in output growth occurred, in the first quarter of 1970, the level of output actually fell. Man-hour adjustments were made by reducing the workweek and in some cases by cutting staff.

However, these adjustment were not sufficient to offset the ouput decline and prevent a falloff in productivity for the nonfarm economy, which with the revised GPN figures which we received a couple of weeks ago was 2.7 percent annual rate -- the largest decline in many years. Reflecting this decline in output per man-hour, unit labor costs in the nonfarm sector rose almost 11 per cent at an annual rate, -- this is a phenominal increase.

However, productivity and unit labor cost trends in the manufacturing sector for 1970 appear to be somewhat different. Output in this sector also declined in the first quarter because durable goods production, which had shored up the economy during much of 1969, dropped reflecting a drawing off of inventories of investment goods and a decline in automobile production.

Man-hours, however, fell very sharply as both staff size and the workweek were sharply reduced. Consequently, productivity in the factory sector actually rose in the first quarter of 1970. Unlike nonmanufacturing, unit labor costs showed a much smaller increase in the first quarter -- 2.7 percent over the fourth quarter and from month to month within 1970 they'll be showing very little increase. As in the nonfarm sector, wage and salary increases seem to be about the same as last year with little slackening in their upward trend so that the productivity gains predominate.

Thus, by the end of the first quarter of 1970, two disparate movements in productivity and unit labor costs have emerged. The employment adjustments to output changes in manufacturing appear to have been very rapid, whereas in nonmanufacturing activities while they were taking place, had not become apparent. When they will take place in the nonmanufacturing sector will depend on the future course of output growth. Thank you.

RECENT PRODUCTIVITY AND WAGE DEVELOPMENTS IN CANADA

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During the past few years, the lack of a harmonious movement between wages and productivity, so important for a healthy economy, has been causing just as much concern in Canada as in the United States.

It is well known that among the most important determinants of price changes are the movements of wage rates (including the rates of the various fringe benefits) and the developments in productivity. Mathematically, unit labour cost, which is the quotient obtained by dividing productivity data, in this case output per man-hour, into compensation per man-hour, will remain constant as long as average hourly compensation and the volume of average hourly output move together. Any faster increase of average hourly compensation than that of productivity will result in increased unit labour costs which more often than not lead to price increases. The causative relationship between these phenomena is so strong that, when seeking the explanation and reasons for increasing prices, one should start by examining the movements of wages and productivity.

The extent of upward shift of the consumer price index between 1965 and 1969 was very similar in Canada to that in the United States. Actually, by 1969, compared with the 1965 level, the CPI went up in the United States by 16.2 percent and in Canada by 16.9 percent. In 1966 and 1967, the increases in Canada were faster than those in the United States, but vice versa in the past two years. I might add that, in Canada, the unemployment rate also went up in 1967 and 1968, with a marginal drop in 1969 when it stood at 4.7 percent in contrast to 3.5 percent in the United States. As we know, however, monthly data for 1970 indicate an upward movement in the United States as well. It is with considerable envy that most parts of the United States, like Canada, regard the State of Texas, where overall unemployment still does not seem to be a serious problem.

All further data to be quoted here will refer to the commercial industries of Canada and their various components. Roughly, data for this universe may be compared to those of the total private economy in the United States. As the greater fluctuations in the weather conditions coincide with a less diverse crop composition in Canada than in the United States, the inclusion or exclusion of agriculture in or from the overall data has more significance with respect to analytical findings in the former than in the latter country.

Much of the following data were especially compiled for the purposes of this present discussion; therefore, they should not be regarded as official statistics of the Canadian Dominion Bureau of Statistics nor should the interpretation of these data be taken as the viewpoint of that institution.

Before dealing with productivity and unit labour costs developments, it might be useful to review the changes in the components of these ratios.

Since the beginning of a period of expansion in the early part of 1961, the commercial industries of Canada experienced an impressive upswing in output until the spring of 1966. At that time a period of adjustment started following several quarters of unsustainable rates of increase. This situation continued through most of 1967 and the period was, among other things, characterized by industrial disputes, cutbacks in automobile and steel production, and adverse effects in industries related to housing due to a decline in that sector's activity. An exceptionally unfavourable crop, resulting in a 14 percent annual drop in the 1967 output of agriculture, also contributed to the overall picture. However, towards the end of 1967, the Canadian economy resumed a strong rate of expansion, which lasted through the first quarter of 1969, after which followed another period of relative stagnation. Average growth rate of output from 1961 to 1965 was 6.6 percent, while from 1966 to 1968 it dropped to 3.3 percent. Data for the past three years are 2.1, 4.5 and 4.9 percent, the latter being very close to the postwar average of 4.8 percent.

While the average for the 1961-65 period was only slightly affected by agriculture, the growth rate between 1966 and 1968, if we exclude this sector, moves up from the 3.3 percent to 3.8 percent. It should also be noted, however, that the commercial nonagricultural industries with their 4.7 percent growth rate in 1969 still did not reach, since 1966, the postwar growth rate of 5.1 percent.

If we compare the movements of output in the goods- and service-producing industries, considerable differences can be found. Between 1961 and 1965 the average annual increase, excluding agriculture, was 8.2 percent in the goods-producing industries and 5.1 percent in the service-producing industries. Data for the 1966-68 period were reversed as output in the goods-producing sector increased by 3.4 percent, while in the service-producing industries it increased by 4.1 percent. It may be noted that the average annual growth rate during the postwar period as a whole was 5.7 percent for the nonagricultural goods-producing industries and 4.5 percent for the commercial service-producing industries.

Besides agriculture, manufacturing is the only other industry division of the Canadian economy for which the Dominion Bureau of Statistics publishes separate data. These data show that manufacturing was one of the major forces affecting the developments mentioned earlier in connection with the overall aggregates, as they reveal more pronounced upswings and slowdowns during periods of expansion and recession than figures for the total economy. Output in manufacturing increased 8.8 percent per annum during the 1961 to 1965 period. This impressive figure dropped to 2.7 percent between 1966 and 1968. In 1969, output advanced by 5.6 percent which is somewhat higher than the 5.2 percent postwar growth rate.

Now, turning to the developments in the field of employment, increases of various degrees, with the exception of agriculture, were recorded during most of the periods under review.

Agricultural employment decreased, practically without interruption, during the whole postwar period at an annual rate of 3.5 percent, reducing the number of persons engaged in agricultural activity by 55 percent between 1946 and 1969. This process was particularly fast during the first part of the period.

Employment in the commercial nonagricultural industries increased by 3.8 percent annually between 1961 and 1965. During the mild recession following that period, the yearly increase was only 1.1 percent, but, during the past two

years, this rate went back approximately to its previous level which is considerably higher than the 2.3 percent for the post war period as a whole.

Employment in the service-producing sector increased considerably faster than in the nonagricultural goods-producing sector. The annual growth rate of the postwar period is 3.3 percent for the former and 1.5 percent for the latter group. This difference applies to most of the subperiods as well. Manufacturing basically followed the pattern of the total nonagricultural goods-producing sector.

Employment developments alone, however, do not present a complete picture of the actual labour input utilized in the production process. The number of hours worked per person decreased considerably during the postwar period, especially in the service-producing industries. Consequently, the increase of total man-hours worked was more moderate than that of persons employed. In the commercial nonagricultural industries, between 1961 and 1965, total man-hours grew by 3.5 percent. Corresponding figures for the 1966-68 and 1968-69 periods were over 0.6 percent and 2.2 percent.

As the combined result of increasing wage rates and employment, labour costs advanced by a higher rate than any of the components of productivity and unit labour costs mentioned previously. In contrast to the 4.8 percent annual increase for output and 1.3 percent for employment, total labour costs grew by 7.7 percent annually during the postwar period. Especially strong upward pressure on wages which started in 1964 culminated in 1966 with total labour cost increase of 12.7 percent in the commercial nonagricultural industries. In that year, tight labour market conditions coincided with an unusually large number of wage negotiations. Stimulated by the size of some earlier wage and salary settlements in construction and certain other industries, by rising prices - particularly for food - and in some cases by profit levels, large wage demands were pressed vigorously and successfully in most sectors of the economy. The rate of wage increases became more moderate in 1967 and 1968, being 10.3 percent 8.8 percent respectively; however, in 1969 they increased again by 11.6 percent. It is noteworthy that the increases in the service-producing sector were faster than those in the goods-producing sector.

The interplay of the various factors just discussed provides the background to the changes in productivity and unit labour cost.

Productivity, in terms of output per man-hour, increased annually by 4.1 percent in the Canadian commercial industries during the postwar period as a whole. As corresponding data for compensation per man-hour show a 7.1 percent gain per annum, unit labour cost increased at the rate of 2.9 percent.

It is noteworthy to mention the effect of developments in agriculture on productivity and unit labour cost. Primarily as a result of technological advancements, output per man-hour in this sector of the economy experienced an annual growth of 5.7 percent. This figure did not lag much behind the 6.2 percent annual growth of compensation per man-hour. Consequently, unit labour cost increased, according to available data, at an annual rate of only 0.7 percent. During the postwar period, agriculture expanded more slowly than did the commercial nonagricultural industries. This slower expansion contributed to the overall increase in productivity in the commercial industries as a whole, due to the lower level of output per unit of labour input in agriculture. However, for similar reasons, this shift also had an increasing effect on compensation per man-hour.

Since 1946, output per man-hour in the commercial nonagricultural industries has advanced at a rate of 3.3 percent per annum in contrast to the 6.4

percent for compensation per man-hour, with the resulting rate of 3.1 percent for unit labour cost. These disproportionate developments during the postwar period are especially apparent in the service-producing industries where output per man-hour increased annually by 2.0 percent, compensation per man-hour by 6.5 percent and unit labour cost by 4.5 percent.

When concentrating on developments in the past decade, the most striking phenomenon is the unmatched increase of unit labour cost in the second half of this period. Between 1961 and 1965, compensation per man-hour, with the exception of the service-producing industries, did not run extensively ahead of output per man-hour. However, during the years 1966-68, the annual growth rate of unit labour cost was 5.8 percent for the total commercial nonagricultural industries, 7.9 percent for the service-producing, 3.1 percent for the goods-producing industries and 4.4 percent for manufacturing. In the latter two cases, these rates were about ten times higher than those during the preceding four-year period. The increases were the combined results of rapidly rising wage rates and a decelerating rate of growth in productivity. The latter showed the elements of a short-run nature associated with the normal cyclical factors which affect productivity measures during a period of slowdown and subsequent reacceleration of output.

Manufacturing can be quoted as characteristic of several available examples demonstrating this short-run relationship between output, labour input and productivity. In 1962, manufacturing output increased by 10.5 percent in a single year, while, after 2 years with small decreases, employment advanced by 2.7 percent. This led to a more than 7 percent increase in productivity. As the rate of output increases slowed down after 1964, employment gains remained at a steady rate resulting in a considerable slowdown of productivity. When in 1967, output remained practically at the previous year's level, so did output per man-hour. Similar patterns could be seen during 1968 and 1969, when output increases were again followed by considerable gains in productivity. Compensation per man-hour did not follow the behaviour of output and productivity changes. Instead, it grew at a consistently high rate, causing soaring unit labour costs.

With the exception of four individual industries, published productivity studies of the Dominion Bureau of Statistics are, for the time being, restricted to the broad aggregates I dealt with before. I might mention, however, that we are at present engaged in compiling productivity and related data for the twenty major industry groups which comprise manufacturing. As the preliminary data resulting from this project suggest, average hourly earnings do not disperse greatly around the 5.5 percent manufacturing average referring to both of the available periods, namely 1946-67 and 1963-67. On the other hand, output per man-hour growth rates are greatly scattered around the average which, for the 1963-67 period, is in the neighborhood of 3 percent. These combinations of average hourly earnings and output per man-hour cause, of course, considerable increase in unit labour cost, as well as significant differences among industry major groups.

In another study involving 87 manufacturing industries for which industry selling prices are available, results show a very small dispersion of data for the four quartiles around the average wage index, regardless of the great range of productivity increases. Comparisons of the resulting unit labour cost data, involving all quartiles, convincingly exhibit the close correlation between unit labour cost and price indexes.

Now, as I reapproach my starting point, namely, the relationship between productivity, average wages, the resulting unit labour cost, and price indexes,

I might point out another circularity, that is between wage rates and prices. Rather than dwell upon the interplay between wages and prices, which may lead to arguments as to whether wages are pushing up or just following the price indexes, it would be more useful at this closing point to mention that Canadian data also support the theoretical expectation that, in the long run, real wage rates and productivity move fairly close together. For example, during the postwar period, in the Canadian commercial nonagricultural industries output per man-hour increased at annual rate of 3.3 percent, while compensation per man-hour, deflated by the consumer price index, rose at 3.9 percent per annum. Corresponding data of 4.0 percent and 3.7 percent for manufacturing show a reverse order but an even closer relationship.

MINIMUM WAGES, YOUTH EMPLOYMENT

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During the last year a fair expenditure of efforts was made by the U.S. Department of Labor and others concentrating on an investigation of the relationship between youth unemployment and minimum wages. Most of these results were published in BLS Bulletin 1965--which was published in April of this year.

The purpose of my remarks this afternoon are to answer three broad questions: why was the study done, what did we investigate, what were the findings.

First, why was the study done? Economic analysis says that if the minimum wage forces wages to rise above the normal market rate, everything else being the same, there will be some sort of an effect at least in the short run. Now it might be that prices will rise up as a consequence of the wage increase or it might be that the wage increase will be absorbed by the firms out of profits or it might be that employment will go down or it might be that the employer will begin to use a higher quality of labor or it might be that there will be some sort of technological change to offset higher costs.

Theory does not say which combination of these possibilities will actually occur nor to what degree they will occur. It does not say who will be disemployed or not employed as a consequence and it does not directly say anything about unemployment. Therefore, on theoretical grounds alone there is no special reason to look at teenage unemployment.

The decision to make a study of the relationship between minimum wages and teenage unemployment involves certain other events. First is a presumption that teenagers are lower quality workers than adults, and, therefore, more apt to be adversely affected by minimum wage. There was, secondly, the fact that teenage unemployment rates rose from 9.2 percent in 1948 to 12.7 in 1968. Even more inposing is the teenage unemployment rate to that for adults. We know that the teenage rate has always been high relative to adults. Right after the war, the teenage rate was about three times as great. In the last few years the teenage unemployment rate has been five and half times as great as the unemployment rate for adults. This is no minor or trivial increase.

A third consideration is that during the postwar period the minimum wage rose from the relatively low level of 40¢ that prevailed in the late 1940's to 75 cents, effective in 1950, to $1.25 in 1963, to a $1.60 in 1968. In other words, at least the dollar amount of the minimum wage had quadrupled. Now this is exaggerating how much it really went up. because money wages were rising in the postwar period.

As a percent of average hourly earnings, minimum wages have not increased in any pronounced fashion. In 1950 when the 75 cent minimum wage went into effect, minimum wages were 56.2 percent of average hourly earnings, In 1968, when the $1.60 minimum wage went into effect, minimum wages were 55.6 percent of average hourly earnings--virtually the same.

Relative to average hourly earnings, minimum wages did not really change much. But a couple of things were different. In the 1960's the minimum wage went up much more frequently. In the 1940's there had only been one change in the minimum wage. In the 1950's, two changes took place, but in the 1960's, 7 of the 10 years had some sort of increase in the minimum wage.

Another fact is that there was an expansion of coverage of the minimum wage. From the time of its enactment in 1938 up until the 1960's, the coverage provisions were virtually unchanged. But in 1961 there was a significant expansion in coverage into the trade and service sector and an even more pronounced increase in coverage in 1967, raising coverage of the private nonfarm work force to 80 percent of the total.

Another fact of interest is that studies were made which indicated that the reason for the high unemployment rates of teenagers was, in fact, the minimum wage. After taking into consideration overall economic conditions, usually measured by the adult unemployment rate, and then relating the unemployment of teenagers to the minimum wage, these studies indicated that there was in fact a statistically demonstrable relationship between the change in the unemployment rate of teenagers and the minimum wage. Moreover there were reasonable relationships in that the studies indicated that minimum wage had more of an impact upon blacks than upon whites and more of an impact on females than on males. This was consistent with developments that were actually occurring in these groups.

To summarize, there is some theoretical underpinning to the notion that minimum wages may be associated with employment problems, more particularly teenagers' employment problems. There is the fact that the teenage employment situation in the United States has deteriorated, most markedly so in the 1960's. There is the fact that the minimum wage rate was raised more frequently in the 1960's, and the fact there were significant expansions of coverage under the law. There is also the fact that some empirical analysis lay the basis for the belief that there was a causal relationship. In the fact of these considerations, the advocacy by some of the even higher minimum wage with universal coverage was viewed by some as a potential prescription for disaster.

In April 1969, the Secretary of Labor requested that the Bureau of Labor Statistics take the lead in departmental effort to study the relationship between minimum wage levels and youth unemployment problems. The Secretary said that he would "expect the study to draw on experience throughout the free world; to develop insights through the use of regression analysis with respect to past relationships; to review the experience and problem of industries employing young people; and to explore such factors as the attitudes of youth, including inner-city youth, toward entry wages."

The study[1]/ that was done involved the efforts of the Wage Hour and Public Contracts Division, the Manpower Administration and the Bureau of Labor

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[1]/ Youth Unemployment and the Minimum Wage, (BLS Bulletin 1657, 1970).

Statistics within the Department of Labor and also involved faculty at the Ohio State University and the University of Wisconsin and independent consultants.

What did we investigate, and what did we find? First we looked at past experience. One approach was through econometric analysis which using quarterly data, analyzed the experience of specific subsets of the teenage population, the 16 and 17-year-old group versus the 18 and 19-year-old group; whites and blacks; males and females. Altogether eight possible groupings. We related minimum wages as well as other factors to a number of measures of how well these groups were performing in the labor force. What happens to their unemployment rate. What happens to the proportion in the population who are employed, what happens to the proportion of the population who are unemployed (the unemployment ratio), and what happened to their labor force participation rates.

We took into consideration the proportion of teenage population engaged at agriculture. When teenagers move from the farms and into the cities, they are moving from a ready made employment situation on the family farm into the cities and ghettos where there is no ready made employment, at least not the kind we usally measure.

Another thing we took into consideration was the proportion of the male teenage population which was in the armed forces, on the assumption that the draft might have some impact on them.

We also took into consideration the adult unemployment rate because as we all know, when the unemployment rate goes up for one group, it goes up for others as well. We also looked at the relative size of the teenage population on the notion that the greater the relative size of the teenage population the more problems they will have in getting them jobs.

We also looked at the number of teenagers in school. When teenagers are in school, they still might be looking for jobs, but they are looking for the right types of jobs--right hours and right locations. Hence school enrollment might compound problems in placing the kids.

Of course, we also took into consideration the minimum wage relative to average hourly earnings and coverage. In some of the analyses we also took into consideration the effect of manpower programs.

The conclusions that we could draw using the quarterly data (we also used annual data, which go further back into history) are these: there are hints of adverse effects of minimum wages but the minimum wage variable is not consistently significant nor does it consistently have the sign that one would expect if in fact the minimum wage variable explained teenage employment problems. From this it should not be concluded that the minimum wage is unimportant or irrelevant. Rather, we ran into one of the bugaboos of regression analysis: multicollinearity in the independent variable set. You can play around with dropping variables, you can make believe they do not really exist, but you really cannot hide the problem that when you have a high degree of interrelationship among so-called independent variables you cannot separate our the effects of each.

But there is another approach to studying past effects. A study was done for us at the Ohio State University by a group under Herb Parnes. The study traced the labor market experience of an identical group of young males from October 1966 to October 1967. That surrounds the period when the minimum

wage was increased from a $1.25 an hour to $1.40 in January of 1967, and coverage of the minimum wage was significantly expanded into the service and trade sector.

Now, if in fact the minimum wage had an adverse effect upon the employment experience of young people, one would expect that the young males who in 1966 were already earning over $1.40 would not have any problems. But the young men who were earning less than a $1.00 in 1966 might now start running into problems.

Theoretical expectation would be that teenagers earning more than $1.40 an hour in 1966 would have fewer employment problems. They should do better than teenagers who were earning $1.00 to $1.40 and certainly would be better off than the teenagers who were earning less than $1.00 an hour in 1966. What were the findings? There was some evidence of adverse effects on some subgroups of young men. More especially, blacks with limited information about the labor market and secondly, among service workers regardless of color. But the authors concluded cautiously that if the minimum wage increase did indeed create unemployment among youth the effect, based on their examination of the data, was not a pronounced one.

Other things we examined were employer hiring standards and problems in placement of youth.

Employers were asked whether they had raised their hiring standards in the last three years and whether the minimum wage was a major factor in raising standards. Very few raised standards (although this was a time of tight labor markets). Of the very few who did raise standards the second most frequently mentioned reason was minimum wages. In no one of the areas that we covered did as many as five percent of the employers both raise standards and say this was caused by minimum wage.

Through the United States Training and Employment Service a survey of experience in 23 areas was made. The purpose was to find out whether or not the local employment office experience indicated that the Fair Labor Standards Act is a significant problem. Generally the offices thought it was not a problem relative to such things as legal restrictions on the employment of teenager, the military draft, and unreliability of teenagers. It should be noted that local employment officers did mention minimum wages as a problem a little more frequently in the case of 16 to 17 year olds than in the case of older teenagers.

Earnings expectations of teenagers were also examined. Do teenagers expect so much that the level of the minimum wage is irrelevant. Data from the Urban Employment Survey and from the National Longitudinal Survey directed by Herbert Parnes, were exploited to shed some light on the issue. In comparing the wage expectations of teenagers who are unemployed with the wages actually received by teenagers who were employed, we found that the unemployed teenagers, on the average did not expect a wage as high as the employed teenagers were actually receiving. There was some indication, however, that among low wage jobs those paying less than the legal minimum at the time the survey, unemployed teenagers were slightly less interested in taking a job paying that little compared to the proportion of employed teenagers who actually had a low wage job. On the average, then, the unemployed did not expect as much as the employed earned, but they were not as willing to accept the lowest wage jobs.

I can only briefly allude to other parts of the study: an analysis of teenagers' contributions to family income; a study by Wage Hour and Public Contracts Division on the student and the learners certification program under

Fair Labor Standards Act; and a very broad study of the use of differentials in State laws. We also looked at experience abroad: The United Kingdom, France, Canada, Japan, West Germany, the Netherlands. On the foreign experience I would emphasize that there are some very serious problems of transferring experience with from countries with very different social and economic institutions to the United States. I think there are lessons to be learned, but we need to be careful in interpreting them.

The study concluded, first, that the increases in the level and coverage of the Federal minimum wage may have contributed to the employment problems of teenagers but it is difficult to disentangle such effects from numerous other influences. Throughout the study, as I have tried to indicate, there are hints of problems that should concern us. But on the whole we cannot say on the basis of the study that we have solid evidence that minimum wages have had an adverse effect upon teenagers. In a large part it is the problem that of these fundamentally important developments such as growth and school enrollment are changing simultaneously and it is difficult to disentangle them.

Secondly we concluded that employer attitudes, as reflected in both the survey of employers the response of public employment offices, experience under the certification program, and experience in other countries suggests that a substantial differential between youth and adult rates would increase the employment of teenagers. The incentive of a large differential will help to overcome the apprehension employers have indicated over the quality of teenagers as employees. The evidence indicates the differential would especially affect the decision of employers to hire 16 to 17 year old employees and especially employers located outside the large metropolitan centers.

The effect of a youth differential would depend on the size of the difference between youth and adult minimum and the relationship of the adult minimum to the current average hourly earnings of rank and file workers. Even then, the effects of the differential would be restricted by conditions unique to the American scene.

We must be cautious in making conclusions. Policy makers must make decisions, but researchers cannot nor should they draw definitive conclusions on the basis of inconclusive evidence. While always open to the charge of pleading art for arts sake, I must argue that the entire question of minimum wages requires continuing study and observation. We can do no less than that.

YOUTH UNEMPLOYMENT AND MINIMUM WAGES:

SOME FURTHER QUESTIONS 1/

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Introduction

The Bureau of Labor Statistics' recent publication, Youth Unemployment and Minimum Wages,2/ appears in the wake of continued high levels of unemployment among teenagers, and concurrently with a rising unemployment rate for the labor force in general. Unemployment is therefore in the front of our minds, as are the peculiar problems of youth in this peculiar age we live in. Indeed, it is increasingly difficult to deal with the employment problems of youth except in the broader context of certain societal issues and the response of young people to those issues.

Surely the question before us is not as direct as that of the impact of the minimum wage on the percentage of teenagers unemployed--complicated as that question now appears, after half the economists in the country have had a go at it. We are confronted, instead, with one more syndrome of the acute disorders today's youth must overcome in their transition into maturity, disorders that are now compounded by a shortening of job opportunities for all age groups. These rites of passage become more and more difficult for that group of young people whose education is scant, precisely because we have done a good job of educating the bulk of the youth with whom (in addition to experienced workers) new job seekers must compete.

Against this backdrop, the BLS study asks whether the statutory minimum wage restricts even further the chances of this group of teenagers of finding jobs. If so, what is the appropriate change in policy? Is a reduced minimum wage for youth (particularly part-time or intermittent workers who are still in school) appropriate? Would such a special rate encourage employers to substitute young for mature workers, or would the lowered rate allow some supposedly less productive workers to be added to present payrolls? What is the rationale for supposing that a lowered minimum wage would generate jobs for teenagers, and what is the evidence that such a reduction would actually have the desired effect?

I. Simple Theory, Complex Proofs

We know that on a purely theoretical level the economic effect of a minimum wage depends on the structure of the labor market. Under purely

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1/ Professor Robert M. Fearn of the North Carolina State University, whose studies of teenage unemployment are cited, offered direction and criticism during the preparation of these comments.

2/ BLS Bulletin 1657, 1970.

competitive conditions it would be impossible to raise wage rates without a sacrifice in the number of workers employed. Therefore, any minimum wage above the competitive level must necessarily come about through a reduction in the numbers employed. Some workers benefit from the minimum wage, but others find themselves unemployed. Furthermore, one would reason that those workers who become unemployed due to the minimum wage are the workers with the lowest productivity. If teenagers, in the main, fall in the class of low productivity workers, it follows that a minimum wage has significant disemployment effects on that age group.

The situation is of course different when there is monopsony or oligopsony in the labor market. The possible effects of a minimum wage under these market conditions are varied. A "rational" minimum wage can theoretically increase both wages and total employment. The highest minimum wage one would utilize would be that wage rate which leaves employment unchanged; hence all gains are in the form of higher wages. Any minimum wage above this level would result in a reduction in employment. A minimum wage between this upper limit and monopsonistic or oligopsonistic wage would score increases in both employment and wages.

A number of empirical studies have been conducted in an attempt to determine the relationship between the minimum wage and teenage employment. These studies unfortunately provide no consensus. A number of the studies concluded that disemployment effects from minimum wages were demonstrable; others concluded that these effects were not apparent.

Let us briefly review several of the studies which suggest that the minimum wage has adverse employment effects on teenagers. In his article, Brozen studied changes in the unemployment rates before and after changes in the national minimum wage.[3/] Comparing the unemployment rate the month before a change to the unemployment rate for the month that the change became effective, Brozen found in the eight cases studied that the seasonally adjusted unemployment rate of 16-19 year olds rose in six cases, fell in one, and remained the same in the other. In a comparison of the average unemployment rates for the 12 months preceding a change to the average for the 12 months following a change, he found that the ratio of teenage unemployment rates to the overall unemployment rate rose in all the six cases where data were available.

In his study Burns ran both lagged (one and two quarters) and unlagged regressions relating the teenage unemployment rates to the unemployment rate of adult males and to the minimum wage as a percent of average hourly earnings in manufacturing.[4/] In his equations, Burns found a statistically significant relationship between minimum wages and teenage unemployment. This relationship was most significant in the case of Negro teenagers.

The Kosters-Welch study is based on non-linear regressions relating the employment rates of teenagers to projected employment, transitional employment (the difference between projected employment and actual employment), and the minimum wage as a percent of average hourly earnings in manufacturing times the estimated coverage of the minimum wage.[5/] The results indicated that increases in the effective minimum wage would increase the vulnerability of

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3/ Yale Brozen, "The Effect of Statutory Minimum Wage Increases on Teenage Unemployment," Journal of Law and Economics, April, 1969.

4/ Arthur Burns, The Management of Prosperity (New York: Columbia University Press, 1966).

5/ Marvin Kosters and Finis Welch, "The Distributional Incidence of Cyclical Fluctuations and the Minimum Wage" (Washington, Council of Economic Advisors and National Bureau of Economic Research 1970).

teenage employment to cyclical fluctuations and would also decrease the teenage share of total employment. In addition, the authors found that a disproportionate share of these disemployment effects fell on non-white teenagers.

Easley and Fearn regressed the unemployment rates of teenagers against the unemployment rates of adults, the proportion of teenagers in the labor force and a set of dummy variables representing the appropriate minimum wage.[6/] Some of the regressions also included additional variables representing extensions of coverage. The authors found significant adverse relationships between the level and coverage of the minimum wage and teenage employment rates. The authors also concluded that these effects were most pronounced for non-white teenagers.

In a recent cross-sectional analysis of 1960 census data Fearn found a consistently positive and generally significant association between the labor force participation of students and the average hourly earnings of full-time employees in retail trade.[7/] Another cross-sectional analysis of 1960 census data by Bowen and Finegan contains conclusions about the wage-participation relation which are strikingly different from those presented by Fearn.[8/] Bowen and Finegan found that when labor force participation rates of male teenagers were regressed against their weekly earnings and other variables, a consistent negative relation appeared. In other words, the areas with the higher teenage earnings had lower teenage labor force participation rates. They concluded that the source of contradiction of these results with economic theory (and also Fearn's results) was in the use of the measured labor force as the labor supply and the nature of the earnings variable. Bowen and Finegan's reconciliation implies the existence of a strong unemployment effect of minimum wages among teenage males.

Finally, Peterson and Stewart conclude that the "impression created in most governmental studies that federal minimum wage policy has produced no adverse employment effects is erroneous." [9/] They find evidence to support the view that minimum wages have adverse employment effects. Furthermore, they conclude that increased unemployment rates among non-whites and teenagers, and particularly among non-white teenagers, can be traced to increases in the minimum wage.

In contrast to the studies just reviewed, another group of researchers conclude that minimum wages have no significant disemployment effects. In a study relating employment levels of various teenage groups to the employment level of adults, a trend variable, and dummy variables representing changes in the minimum wage, Barth found the minimum wage variable frequently insignificant and when significant only occasionally having the hypothesized sign.[10/]

6/ James Easley and Robert M. Fearn, Minimum Wages and Unemployment of Teenagers (North Carolina State University, 1969), unpublished manuscript.

7/ Robert M. Fearn, Labor Force and School Participation of Teenagers (North Carolina State University, 1969).

8/ William G. Bowen and J. Aldrich Finegan, The Economics of Labor Force Participation (Princeton, N.J.: Princeton University Press, 1969).

9/ John M. Peterson and Charles J. Stewart, Jr., Employment Effects of Minimum Wage Rates (American Enterprise Institute, 1969).

10/ Peter S. Barth, "The Minimum Wage and Teenage Unemployment" (Industrial Relations Research Association, 1969).

Folk in a study of data for 1945 to 1966 related teenage unemployment rates and the labor force participation rate of teenagers to the unemployment rate of adults, a trend variable, and a dummy variable representing increases in the minimum wage.[11] Folk, like Barth, found that the minimum wage variable was insignificant and in a majority of cases did not have the hypothesized sign.

In an investigation not primarily concerned with the issue of minimum wages, Thurow related employment of disadvantage to comparable advantaged groups in a model which included a minimum wage variable, specifically the minimum wage as a percent of average hourly earnings.[12] In the analysis, the minimum wage proved to be an insignificant variable.

The last study to be reviewed is one by Kalachek.[13] In a cross-sectional analysis of state minimum wage laws, Kalachek regressed teenage unemployment against a number of variables including a dummy variable representing the presence of a State minimum wage law. He found that the minimum wage variable either had the wrong sign or was insignificant.

In summary, Brozen, Burns, Kosters-Welch, Easley-Fearn, Bowen-Finegan, and Peterson-Stewart concluded that adverse employment effects of minimum wages were apparent. Barth, Folk, Thurow, and Kalachek concluded they were not.

II. Questions and Answers from the BLS Study

In the Bureau of Labor Statistics study, linear regressions were used to represent the labor force behavior of teenagers. Regressions were computed for quarterly data from 1954-68 and annual data from 1948-68. For the quarterly data, teenage employment and unemployment ratios (and teenage labor force participation of teenagers, agricultural employment ratios, the unemployment ratio of adult males, population ratios, school enrollment ratios, a minimum wage variable, and dummy variables representing different manpower programs. The variables included in the annual regressions differed from those in the quarterly data primarily in detail, rather than concept.

The stated results of these regression analyses are "that they do not permit confident conclusions about the effect of minimum wage laws upon the employment experience of teenagers." When all variables are included, the minimum wage variables not infrequently have the wrong sign or are not statistically significant. These results hold in general for both the quarterly and the annual data.

The study, however, does draw some highly tentative conclusions. It suggests that extensions of coverage of the minimum wage have had more of an effect on teenage employment than the level of the minimum wage; that Federal

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11/ Hugh Folk, "The Problem of Youth Unemployment," in The Transition from School to Work (Princeton, N.J.: Princeton University, 1968).

12/ Lester C. Thurow, "The Determinants of the Occupational Distribution of Negroes," in G. Somers, ed., Education and Training of Disadvantaged Minorities (Madison, Wis.: Wisconsin University Press, 1969).

13/ Edward Kalachek, "Determinants of Teenage Employment," Journal of Human Resources, Winter 1968.

manpower programs and minimum wages may have tended to offset each other; and that minimum wages seem to have had a larger effect upon 16 and 17 year olds than upon 18 to 19 year olds. In brief, no confident conclusions concerning the effects of minimum wages on teenage unemployment can be drawn. But there appears to be a presumption of some adverse effects in the data available.

The study also considered the effects of the 1966-67 changes in the minimum wage on teenage male employment. The analysis of the survey data yielded no confident conclusions. The data did not reveal any general tendency for teenage workers to be among the first to feel any restriction of employment opportunity the minimum wage may have created. Therefore, if the minimum wage increases did indeed create unemployment among teenagers, the effect was not a large one.

The remainder of the report is concerned with hiring standards and the placement of youth, expectations and earnings, the use of differential minimum wages, and foreign experience in the area of minimum wages.

If the presumption that the level and coverage of the Federal minimum wage may have contributed to the employment problems of teenagers is valid, one would suppose that these effects would be concentrated in the youth-intensive industries, i.e., primarily retail trades. Kalachek, and Kosters and Welch have pointed to the relatively high rates of substitution between teenagers and adults in youth-intensive industries--rates considerably higher than in the adult-intensive industries.

III. Some Policy Considerations

Examination of studies in some areas leads to confusion because the authors of the investigations are not precise in delineating the questions under consideration. Hence, one concludes his review with the puzzled response, "here are a lot of answers; I wonder what the questions are?" But the studies on this subject are confusing for a different reason. They pose the questions quite clearly and then research precisely those questions. But the research yields different findings in response to the same query, and unless we are willing to play one methodology off against another we are hard put a draw policy conclusions. Would it help, I wonder, to pose the questions somewhat differently?

Suppose we ask again, what is it we wish to make possible for youth? Is the primary policy goal that of helping them find jobs that provide some discipline and the minimum training necessary for satisfactory permanent participation in the labor force? And if so, what are the requisites of such jobs? How should the teenagers of this era be merged into the working world? Is it to their advantage to have part-time, then full-time jobs at whatever wage--but in any event, jobs--starting, say, at age 16? Or would their long-run interests be better served by concentrated educational effort for as long as they perform competent academic work, after which the break from school to work is sharp and complete, occurring only after substantial education is acquired? In the former case, work experience may be gained at some cost (in earnings below the minimum for adults); in the latter case, formal education is gained at greater costs (in earnings foregone altogether).

For high school dropouts, the options are narrowed but there is nevertheless the social choice between making special (wage) arrangements in the hope that these youth will be absorbed into jobs, and setting up special training projects for them. In the latter case, their remuneration is less than the minimum wage paid to adults, but the long-run advantage of training is an offset in the same manner as formal education; in the former case, the jobs

available may be deadend, with frustrating long-run effects. For this particularly vulnerable group of teenagers (which includes many of our nonwhite youth), the only solution may be manpower training. The job potential at any rate of pay is likely to be minimal, except in the tighest possible labor market.

For the short run, suppose we conclude that it is in fact desirable to ease teenagers into jobs via either the job-training route or directly, by offering employers a wage incentive to hire youth. If this is the goal, what is the appropriate wage policy, given the research findings on the relationship of teenage unemployment and the statutory minimum?

If, as several scholars conclude, a lowering of the minimum wage would have no employment effect, the reduction would offer no solution--nor would it pose any problem. We thus run no risk in reducing the wage; nothing much will happen. But if the opposite view is correct, the reduced minimum will help to provide jobs for teenagers in the youth-intensive industrial sectors either by displacing mature workers who are at or above the minimum, or by increasing total employment in these sectors. In industries where teenagers are highly substitutable for mature workers, there will be a shift in the age composition of the work force. This will occur at the cost of some immediate disemployment of experienced workers, or through the gradual replacemdnt of teenagers for adults as preference is given to the former in subsequent hirings. In either case, the displacement effect would of course be minimized in a period of full employment.

In longer-run terms, the policy question has to do with the worklife style we seek, both for young and older workers, and with the timing of work. How committed are we to our present pattern of concentrating worklife in the middle years, with ever-increasing spans of nonworking time at the beginning and the end of worklife? Since the turn of the century, labor force participation has dropped for both teenagers and men aged 65 and over in recent years, for men in their early 60's. In contrast to the first half of the century, moreover, when increases in free time accruing to man in the process of economic growth were conferred during the worklife in the form of shorter workweeks and longer vacations, increases in nonworking time since mid-century have emerged instead as reductions in the length of worklife.

Interest in attempting to change the temporal allocation of work through such means as lowering the minimum wage for youth belie a discontent with the present pattern. Whether a change in the minimum wage alone would have any substantial effect on the overall pattern is dubious. As the Bureau of Labor Statistics study indicates, those nations successfully operating with lower wages for youth are nations that have other important manpower practices such as apprenticeship arrangements, extensive on-the-job training programs, etc. And as Levine and Somers conclude from their study of Japanese wages, it is important that all the components of these alternative systems be considered, if a change in minimum wage policy is to be effective.

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